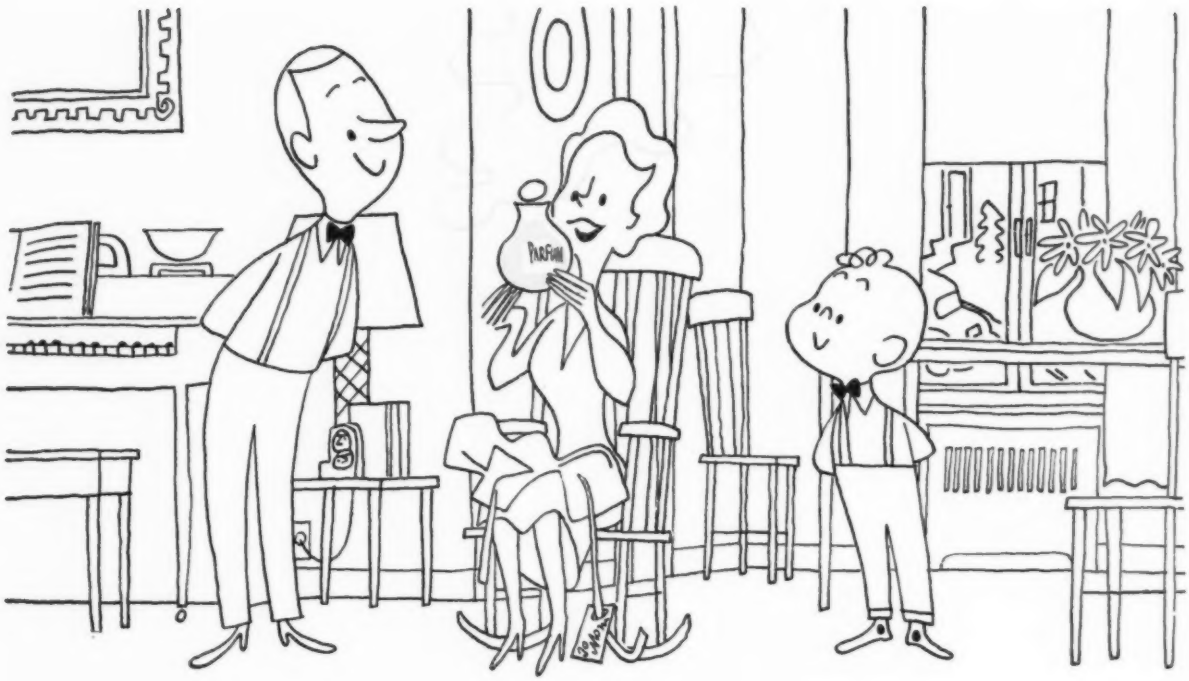
LOYOLA UNIVERSITY
LIBRARY
NEW ORLEANS, LA.

Drug and Cosmetic Industry

SEPTEMBER 1954

When men make a hit with it



helps

The quality a perfume has is the quality it starts with. Norda creates perfume compounds that are basic to high class perfumes.

Leading perfume makers depend on Norda. Many a subtly blended fragrance and alluring, elusive odor have Norda knowledge to thank.

Experience, care, and very great pride are advantages Norda offers. Norda has always made good selling scents. Send for free Norda samples today.

ESSENTIAL OIL & CHEMICAL COMPANY, INC.
601 West 26th Street, New York 1, N. Y.

CHICAGO • LOS ANGELES • SAN FRANCISCO • ST. PAUL • DALLAS • MONTREAL • TORONTO • HAVANA • LONDON • PARIS • GRASSE

first choice

- *First choice of leading pharmaceutical chemists*
- *First choice of prominent manufacturers of parenteral preparations*
- *First choice of leading makers of multivitamin tablets, capsules, drops, elixirs*

Roche Vitamins

- **Vitamin A** acetate and palmitate
- **Dry Vitamin A** acetate
- **Ascorbic Acid** • **Sodium Ascorbate**
- **Riboflavin** • **Riboflavin-5′-Phosphate Sodium**
- **Biotin** • **Thiamine** hydrochloride and mononitrate
- **Niacin** • **Niacinamide**
- **Pyridoxine** hydrochloride
- ***dl*-alpha-Tocopherol** acetate and unesterified

Vitamin Division • HOFFMANN-LA ROCHE INC. • Nutley 10, N. J.

NUtley 2-5000

Pacific Coast distributor: L. H. BUTCHER CO., San Francisco, Los Angeles, Seattle, Portland, Salt Lake City

In Canada: Hoffmann-La Roche Ltd., 286 St. Paul Street, West; Montreal, Quebec

Drug and Cosmetic Industry

September 1954 Vol. 75 No. 3

feature articles

309 **The Sun Tan Industry—Part One**
by L. Stambovsky

312 **Keeping Pace with the Antihistamines—Part One**
by Milton A. Lesser

315 **Perfumed Aerosols**
by Harry Hilfer

316 **Direct Results from Direct Advertising**
by Charles S. Downs

318 **F.D.C. Act Enforcement**
by Geo. P. Larrick

320 **Pharmacy in Pictures**

322 **Infrared Spectroscopy and Perfume Materials**
by Ernst T. Theimer and Stanley K. Freeman

324 **New Synthetic Rhodinol**

327 **What's Coming in Packaging?**
by John H. Warren

departments

299 **Keeping Posted**
by Thomas R. Farrell

331 **Packaging and Selling**
by Frazer V. Sinclair

337 **Package Doin's**

340 **Patent Thoughts and Trends**
by Thomas Cifelli, Jr.

351 **News**
by Frank S. Child

363 **Trade Literature**

365 **Management Forum**
by Francis Chilson

377 **Advancing Therapy**
by Milton A. Lesser

381 **Compounder's Corner**
by Milton A. Lesser

384 **Animal Health**
by Milton A. Lesser

388 **Perfumer's Shelf**
by Milton A. Lesser

391 **Abreast of the Markets**
by Frank S. Child

392 **Industry's Books**
by Harry G. Kelbly

394 **Readers' Questions**
by Milton A. Lesser

THOMAS R. FARRELL, *Editor*
FRANK S. CHILD, *Managing Editor*
MILTON A. LESSER, *Technical Editor*
HARRY G. KELBLY, *Raw Material Editor*
FRANCIS CHILSON, *Production Consultant*
MAX FRANKEL, *Art Director*

Reprints of cover illustrations are available on request.

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Manager, P. W. Alexander; Advertising Representatives, Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Midwestern Advertising Representative: Dwight Early and Sons, 100 No. LaSalle St., Chicago 2, Telephone, CEntral 6-2184.

Subscription price $3.00 a year, in advance Foreign Countries, $5.00. Single copies, 35c; Back issues 50c. Entered as Second Class Matter, January 1, 1928 at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1954
by Drug Markets Inc.

THE TWINS THAT WIN:

Fragrance

Flavor

BOTH FOUND IN ONE PRODUCT

ZIMCO® Vanillin

The Original Lignin Vanillin

ZIMCO's outstanding excellence and uniformity of flavor are the result of its exclusive, patented manufacturing process . . . developed through years of scientific experiment and research.

Remember . . . your best source of finished, ready-to-use flavors is your flavor manufacturer. Ask him about ZIMCO, the *Original* pure Lignin Vanillin. *There's nothing finer.*

Zimco Vanillin is noted for Quality and Dependability.

Consult Your Flavor Supplier

Sterwin Chemicals INC.
SUBSIDIARY OF STERLING DRUG INC.

1450 Broadway, New York 18, N.Y.
2020 Greenwood Ave., Evanston, Ill.

WORLD'S LARGEST SUPPLIERS OF VANILLIN

Shipments direct from plant, Rothschild, Wisc.
Emergency deliveries from: Atlanta, Dallas, Evanston (Ill.), Los Angeles, Portland (Ore.), Rensselaer (N.Y.), St. Louis and San Francisco

TIME and PATIENCE are combined with uncompromising Florasynth skill to bring you this modern interpretation of fragrance perfection . . . with its highly desired influence in popular product appeal . . .

Florasynth LABORATORIES, INC.

CHICAGO 6 • NEW YORK 61 • LOS ANGELES 21
CINCINNATI 2 · DETROIT · DALLAS · MEMPHIS · NEW ORLEANS 12
ST. LOUIS 2 · SAN FRANCISCO 7 · SAN BERNARDINO
FLORASYNTH LABS. (Canada Ltd.) · MONTREAL · TORONTO · VANCOUVER · WINNIPEG
PRODUCTOS Y LABORATORIOS FLORASYNTH, S.A. MEXICO 11, D.F.

ADVERTISEMENT—*This entire page is a paid advertisement* *Prepared by U. S. Industrial Chemicals Co.*

U.S.I. CHEMICAL NEWS

Fall ★ A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1954

NATIONAL DISTILLERS FORMS NEW CHEMICAL DIVISION

ATTENTION

National Distillers, U.S.I. Announce Change of Head Office Address

National Distillers Products Corporation, and U. S. Industrial Chemicals Co., a division of National, have announced the relocation of their head offices, formerly at 120 Broadway, New York 5, N. Y. The new address is 99 Park Ave., New York 16, N. Y. and the telephone number is OXford 7-0700.

Renew Taxfree, Specially Denatured Alcohol Permits

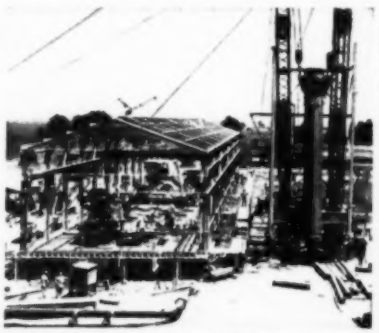
Now is the time for users of specially denatured alcohol to renew their basic permit (Treasury Department Form 1479) for 1955. It is also time for users of Taxfree alcohol to complete and file with the Assistant Regional Commissioner — Alcohol and Tobacco Tax Division — their application (Form 1450) for renewal of their Taxfree Alcohol permit for 1955. If you require forms or any assistance in their preparation, please call your nearest U.S.I. office.

Consolidation of All Chemical Activities Paves Way for Future Expansion in the Chemical Field

U.S.I. Continues as the Selling Organization for National Distillers' Chemical Products

All chemical activities of National Distillers Products Corporation have been integrated into a single Chemical Division, National officials announced recently. This consolidation is just one part of National Distillers' long range program for future growth and development in the chemical field. Other phases of the program include centralization of research at Cincinnati, Ohio, and a greater emphasis on bulk industrial chemicals — where National has competitive advantages by virtue of low cost integrated facilities well situated as to markets.

The new Chemical Division is enthusiastically carrying out the company's expansion program and by December 1954, it is estimated National will have a $70 million investment in chemical plants with 85% of this capacity less than 5 years old.



A typical example of National's expansion plans is this ammonia plant being built at Tuscola, Ill. Capacity will be 60,000 tons/year.

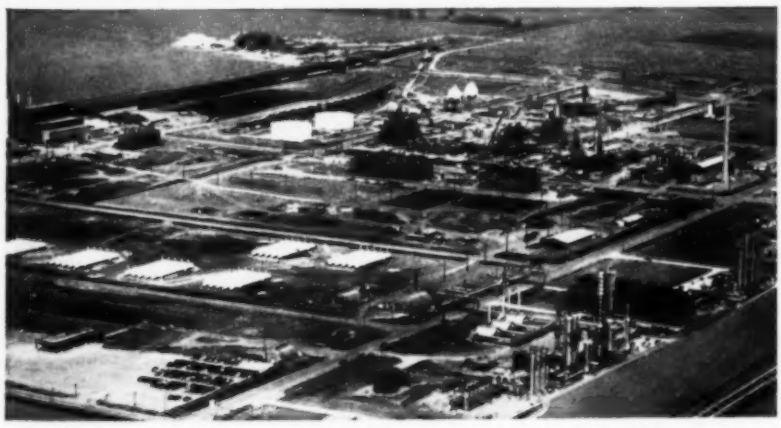
New "National Distillers Building" at 99 Park Ave. will house all of National's N. Y. Offices.

U.S.I. the Sales Organization

Integration of chemical activities will combine the operations of U. S. Industrial Chemicals Co. and National Distillers Products Corporation. U.S.I., however, will continue as the sales and distribution organization for National Distillers. The U.S.I. name will still be used for product lines and labels; and U.S.I. sales offices, division managers and salesmen will continue to serve their customers as before.

The Chemical Division will also carry on activities for National Petro-Chemicals Corp., but that company will maintain its corporate identity.

MORE



Aerial view of gigantic National Petro-Chemicals plant at Tuscola, Ill. Located on a 500-acre plant site, its hydrocarbon extraction and fractionation units are the largest in the world. Further expansion of facilities at this location will include a polyethylene plant, an ammonia plant, an alcohol denaturing plant.

Fall ★ **U.S.I. CHEMICAL NEWS** ★ 1954

CONTINUED

Move Into New Offices

The Chemical Division is located in the new "National Distillers Building," 99 Park Ave., N. Y., to which it moved on August 16. All of National Distillers' and U.S.I.'s New York offices recently moved to this modern building.

Arrangement of offices and selection of equipment were made with maximum convenience and efficiency in mind. The latest in telephone equipment and a battery of teletype machines were installed, the latter linking sales offices and plants.

Expansion of Operations

National Distillers has already announced its intent to expand operations and facilities in certain fields. Other expansion plans will be announced at later dates. Present plans call for continuation and expansion in the following fields—

(1) *Metallic sodium and derivatives*, such as ethyl acetoacetate and the related compounds, the arylides, and isosebacic acid. Isosebacic acid, a new product developed by National's research laboratory, has properties similar to adipic acid and will find use in the production of synthetic lubricating oils, polyamides and other synthetic resins and plasticizers. Commercial production of isosebacic acid will start in 1955. National produces 50 million pounds of metallic sodium per year at its Ashtabula, Ohio, plant.

(2) *Raw materials for the fertilizer industry*, such as sulfuric acid, ammonia, and nitrogen solutions. The Company's four sulfuric acid plants have a capacity of over 1,000 tons per day. Ammonia production will be boosted to 60,000 tons per year by mid 1955.

(3) *Petrochemicals*, available through a 60% owned subsidiary, National Petro-Chemicals Corp. These products include ethyl alcohol, ether, and ethyl chloride. Polyethylene production is scheduled for early next year. Facilities have been modified to provide the extremely pure ethylene required for high quality polyethylene.

(4) *Alcohol, alcohol derivatives and solvents.* With synthetic ethyl alcohol from National Petro-Chemicals and with fermentation plants at New Orleans, La., and Anaheim, Calif., National Distillers expects to be completely integrated in alcohol and derivatives. New denaturing plants will be built at Newark, N. J., and Tuscola, Ill.

(5) *Feed Supplements.* The company will continue to manufacture and market to the pharmaceutical and animal feed trade such products as methionine; Vitamins A, D_2 and K_3; riboflavin; calcium pantothenate; niacin; vitamin B_{12}; antibiotics; and distillery by-products.

(6) *Chlorine and caustic soda.* National Distillers has 2 plants at Huntsville, Ala., producing these heavy chemicals.

Research activities are being centered in Cincinnati, in a recently expanded laboratory building. A new pilot plant is also being built there. This new laboratory and pilot plant set-up will provide ample facilities for National Distillers' many continuing chemical research projects.

For more information on National Distillers' chemical products write to the Editor, U.S.I. Chemical News.

Methionine Increases Riboflavin Yields

Methionine has been found to increase yields of riboflavin obtained through fermentation methods. There was a dependency of the organisms producing riboflavin on some part of the sulfur-bearing amino acid. Additions of methionine also brought about even greater yields of vitamin B_2 when supplemented with L-histidine.

Aerial view of National's sodium plant at Ashtabula, Ohio, which produces 50 million pounds of metallic sodium per year.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

A reusable aerosol container which can be refilled by the consumer has been announced. Carbon dioxide is used as a propellent and design features are said to make this pressure-type container adaptable for use with new compounds and package designs. **(No. 1060)**

New type carbon paper for pen or pencil reportedly produces fresh copy that cannot be smudged. Described as long wearing with improved manifolding properties, it produces a number of legible copies with little pressure. **(No. 1061)**

Sealed-in decorative effects in compression molded plastic products such as laminated sheets, jar tops, and jewelry boxes now can be produced for the first time in this country by means of a new process. **(No. 1062)**

A package that prevents spoilage in transit of temperature-sensitive materials has been developed. Designed for shipping living tissue-culture cells, this thermally insulated package also can be used for pharmaceuticals and other items affected by temperature extremes. **(No. 1063)**

A silicone water repellent for masonry is said to be more effective on brick than any previous material. It reportedly retards cracking, reduces maintenance, and prolongs useful life and natural appearance of brick and concrete surfaces. **(No. 1064)**

A non-acid rust removing material can simultaneously strip paint, rust and primer from ferrous metal surfaces in one operation according to the manufacturer. Requiring only 2 simple steps—a dip and a pressure rinse—it eliminates need for multi-tank installations. **(No. 1065)**

A solvent-cleaner and odor suppressant is said to be highly effective either for dissolving and removing tars, gums, waxes, and oils or for controlling disagreeable odors from refuse areas, sewage plants, etc. **(No. 1066)**

A lacquer for architectural aluminum has excellent weather and ultraviolet resistance plus film toughness, clarity, and flexibility according to recent reports. **(No. 1067)**

A light stable polystyrene for use in light fixtures, signs, etc. reportedly offers light stability 8 to 10 times better than that of general purpose polystyrene but retains characteristic chemical and physical properties of the general purpose material. **(No. 1068)**

A furniture touch-up kit hides nicks and mars and makes it easy to do a professional job of blending with every wood shade. **(No. 1069)**

PRODUCTS OF U.S.I.

ALCOHOLS
- Butanol (Normal-Butyl Alcohol)
- Fusel Oil — Refined

Ethanol (Ethyl Alcohol)
- Specially Denatured—all regular and anhydrous formulas
- Completely Denatured—all regular and anhydrous formulas
- Pure—190 proof U. S. P., Absolute—200 Proof
- Solox*—proprietary solvent—regular and anhydrous

ETHERS
- Ethyl Ether, U. S. P.
- Ethyl Ether, Absolute—A.C.S.

ACETONE—A.C.S.

ANSOLS
- Ansol* M
- Ansol* PR

ACETIC ESTERS
- Butyl Acetate
- Ethyl Acetate—all grades
- Normal-Propyl Acetate

OXALIC ESTERS
- Diethyl Oxalate

OTHER ESTERS
- Diatol*
- Diethyl Carbonate

INTERMEDIATES
- Acetoacetanilide
- Acetoacet-ortho-chloroanilide
- Acetoacet-ortho-toluidide
- Acetoacet-para-chloroanilide
- Ethyl Acetoacetate
- Ethyl Benzoylacetate
- Ethyl Sodium Oxalacetate

FEED PRODUCTS
- Calcium Pantothenate (Feed Grade)
- Choline Chloride Products
- Curbay B-G* 80
- DL-Methionine (Feed Grade)
- Niacin, U.S.P.
- Riboflavin Concentrates
- Special Liquid Curbay*
- U.S.I. Vitamin B_{12} and Antibiotic Feed Supplements
- Vacatone* 40
- Vitamin A, D_3, and K_3 Products

OTHER PRODUCTS
- Anhydrous Ammonia
- Caustic Soda
- Ethylene
- Liquid Chlorine
- Metallic Sodium
- DL-Methionine (Pharm.)
- N-Acetyl DL-Methionine
- Nitrogen Solutions
- Propionic Acid
- Sulfuric Acid
- Urethan, U.S.P.

*Reg. U.S. Pat. Off.

U.S.I. INDUSTRIAL CHEMICALS CO.

Division of National Distillers Products Corporation

99 PARK AVENUE, NEW YORK 16, N. Y. BRANCHES IN ALL PRINCIPAL CITIES

ESSENTIAL OILS
AROMATIC CHEMICALS
PERFUME BASES

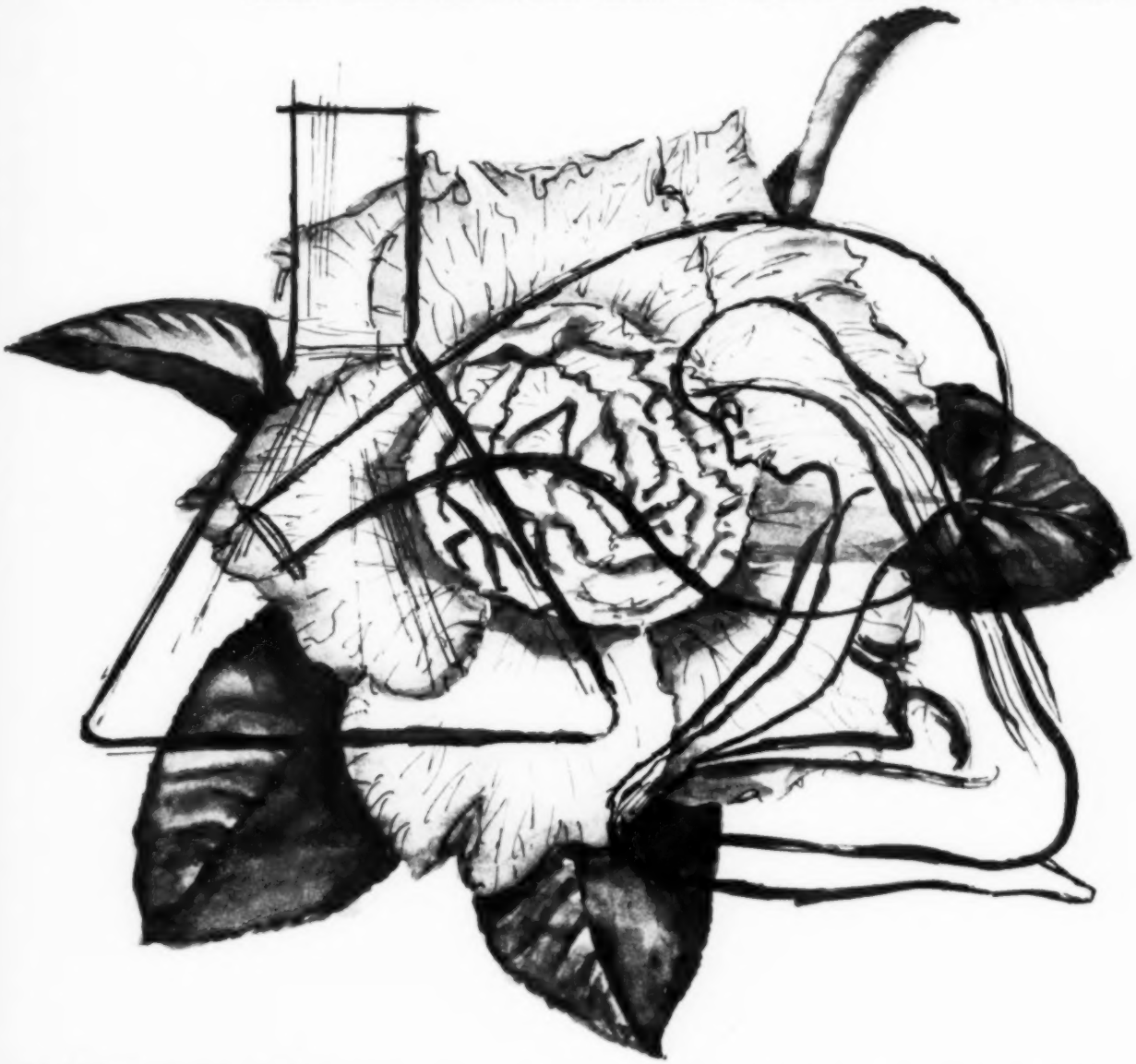
Roure-Dupont inc.

General Offices: 366 Madison Avenue, New York 17, N. Y.

Chicago Branch: 510 North Dearborn St.
Los Angeles Branch: 5517 Sunset Boulevard, Hollywood

Sole Agents in United States and Canada for:

ROURE-BERTRAND FILS et JUSTIN DUPONT Grasse (A.M.) France, Argenteuil (S.&O.) France



MUGUETOLIDE . . . The exquisite scent of the Muguet de l'Ile de France (wild Lily-of-the-valley) freshly culled. . . . From Roure-Bertrand Fils & Justin Dupont of France comes this extraordinary specialty . . . not actually a composition but almost a "natural body" . . . the joining in harmony of two bodies newly isolated in the French Laboratories and accompanied by a bouquet which exalts them. Penetrating, persistent, it has lingered for as long as fifteen days, conserving until the end its entire floral tonality. Its use in perfumery is limitless! MUGUETOLIDE confers a *gentleness* to diverse floral compositions—gives them a "wild flower" note—an incomparable "roundness" so sought after by perfumers. . . . In soaps—in all manner of cosmetics—its odor is penetrating, delicious. It does not color, is stable to light, non-injurious to the skin.

MUGUETOLIDE is truly a masterpiece of perfumery! **$10.00 lb.**

ACM-GAIR FEATURES

1. WHITE, SUPER-SMOOTH PAPERBOARD TAILORED TO THE JOB
2. RICH, SPARKLING COLOR AND "PRECISIONED PRINTING"
3. EVERY DETAIL QUALITY-CONTROLLED WITH SCIENTIFIC ACCURACY
4. APPEARANCE REFLECTS QUALITY AND DIGNITY

Free
CONSULTING SERVICE

Send for the ACM-GAIR Packaging Problem Data Sheet! Fill in and return it for *scientifically accurate* analysis and recommendations. Our skilled engineers will apply their vast experience, their specialized knowledge of paperboard, construction, design, color harmony, mechanical production, merchandising, and other factors to your specific problem! Extensive ACM-GAIR Mills and Plants produce many types of Paperboard. We can therefore select the ONE BEST grade for your needs. This valuable "Precisioned Packaging Service" does not obligate you in any way. Write today!

How to Step Up the Selling Power of Your Products

GAIR Since 1864 ®
ACM
PRECISIONED
Packaging
Service

ACM-GAIR Folding Cartons *HELP YOU SELL!* Many millions are specified by MILES LABORATORIES INC. and other highly successful packagers, large and small.

Check the ACM-GAIR features listed here. See *why* these Cartons add so much to the selling power of many products. Dealers are quick to take advantage of the plus attraction . . the greater brilliance and beauty of the Folding Cartons we make. ACM-GAIR Cartons will help you get preferred display positions too!

Join the growing group of critical Carton buyers we serve. Discover the impressive results of ACM-GAIR fine printing on Paperboard *made in our own mills* to the most exacting specifications. It's this UNIFORM excellence that counts . . a precise quality we've developed and perfected through 90 years of "Precisioned Packaging Service"!

Our experienced staff of engineers is ready to lend you every possible aid. Tell us about *your* needs. Or, ask today for our Packaging Problem Data Sheet.

AMERICAN COATING MILLS DIVISION • ROBERT GAIR COMPANY, INC.
228 North La Salle Street, Chicago 1, Ill.

A SCIENTIFIC, SPECIALIZED, FULLY INTEGRATED PAPERBOARD, FOLDING CARTON, CARRIER AND SHIPPING CONTAINER SERVICE. SALES OFFICES IN PRINCIPAL CITIES OF U. S. AND CANADA. MILLS & PLANTS: CAMBRIDGE, MASS. • CHICAGO, ILL. • CLEVELAND, OHIO • ELKHART, IND. • GRAND RAPIDS, MICH. • HAVERHILL, MASS. • HOLYOKE, MASS. • LOS ANGELES, CALIF. • MARTINSVILLE, VA. • MIDDLETOWN, OHIO • NATICK, MASS. • NEW LONDON, CONN. • NORTH TONAWANDA, N. Y. • PHILADELPHIA, PA. • PIERMONT, N. Y. • PORTLAND, CONN. • PORT WENTWORTH, GA. • RICHMOND, VA. • SYRACUSE, N. Y. • TETERBORO, N. J. • TONAWANDA, N. Y. • IN CANADA: CAMPBELLFORD, ONT. • EDMONTON, ALBERTA • FRANKFORD, ONT. • LONDON, ONT. • MONTREAL, QUE. • TORONTO, ONT. • WINNIPEG, MAN.

FROM COAST-TO-COAST...IF IT'S PAPERBOARD, CARTONS, CARRIERS

Bactine
Bactine
Miles Nervine
Miles Nervine
ONE A DAY
MULTIPLE VITAMINS
Tabcin
Tabcin
Alka-Seltzer
Alka-Seltzer
OR SHIPPING CONTAINERS . . . IT'S A JOB FOR ACM-GAIR

● *And uniform savings for you!* For any variation in the beeswax base of your chemical, pharmaceutical or cosmetic preparations can cause additional expense in your laboratory and plant—and lost sales at your dealers' counters.

Natural refined beeswax is a small fraction of your total product cost. Yet the unchanging purity, texture and whiteness of Beehive Brand Beeswax can be the big help in keeping your product up to the high standards you have set.

FREE CONSULTATION SERVICE

The experimental data and practical manufacturing experience of nearly a hundred years' specialization in beeswax and beeswax compounds are at your service without cost or obligation. Write us about your beeswax problems.

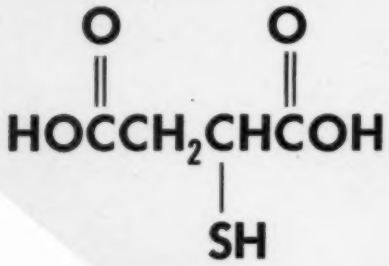
WILL & BAUMER
Candle Co., Inc.
Syracuse, N. Y. **Established 1855**

SPERMACETI • CERESINE • RED OIL • YELLOW BEESWAX • COMPOSITION WAXES • STEARIC ACID • HYDISTEAR

Still Another *National Aniline* Dicarboxylic Acid With an Important Potential in Resins, Plasticizers and Rubber

THIOMALIC ACID

(Mercaptosuccinic Acid)

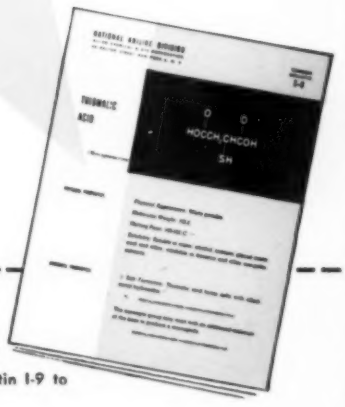


Thiomalic Acid is unique as the only commercially available dicarboxylic acid containing a reactive mercapto group as well as two carboxyl groups. With its three functional groups and the resulting possibilities for cross linkage, Thiomalic Acid should appeal to those engaged in resin, plasticizer and rubber research. This interesting chemical also should find application in pharmaceuticals and dyestuffs.

Thiomalic Acid is one of a growing group of dicarboxylic acids and anhydrides developed by National Aniline as an outgrowth of our leading position in this area of organic chemical development. Research samples are immediately available. Larger quantities for semiplant studies can be supplied.

Send for Technical Bulletin I-9

This six-page bulletin contains comprehensive physical properties, chemical properties, suggested uses and a basic bibliography of literature references as a starting point for your own work with this potentially-important intermediate. A copy will be sent without cost or obligation. The coupon below is for your convenience.



NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Columbus, Ga. New Orleans Chattanooga Toronto

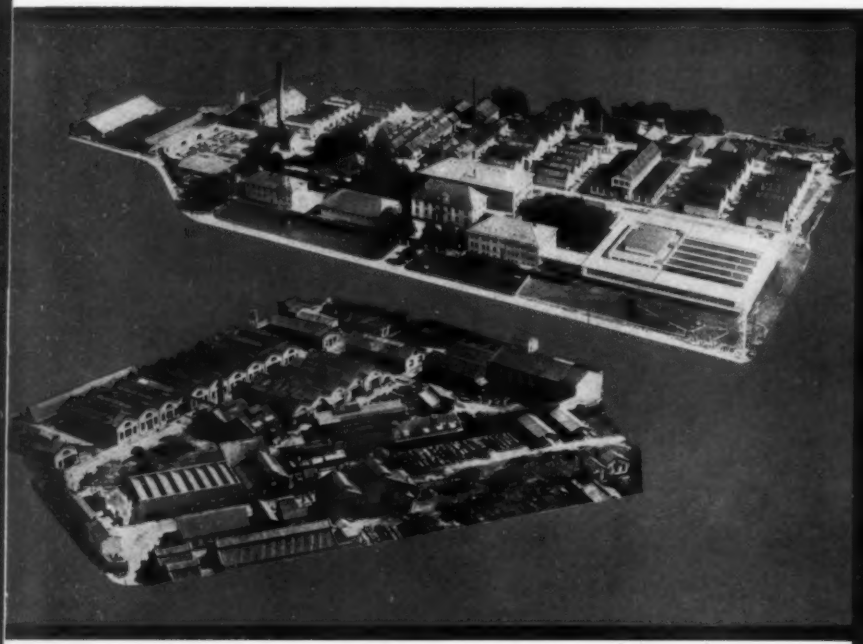
Please Send Copy
of Technical Bulletin I-9 to

NAME _____

ADDRESS _____

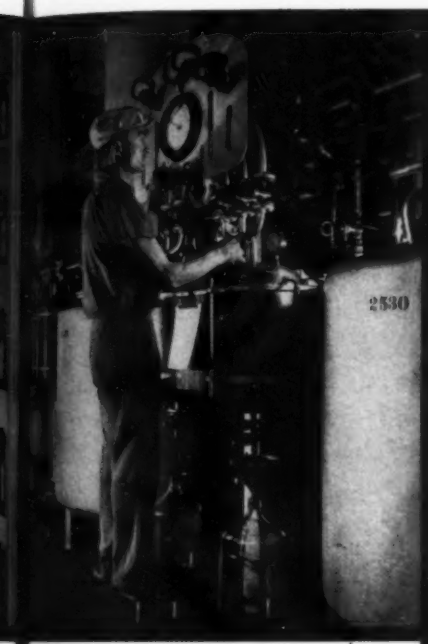
_____

How Givaudan's creative imagination enhances your perfuming skills

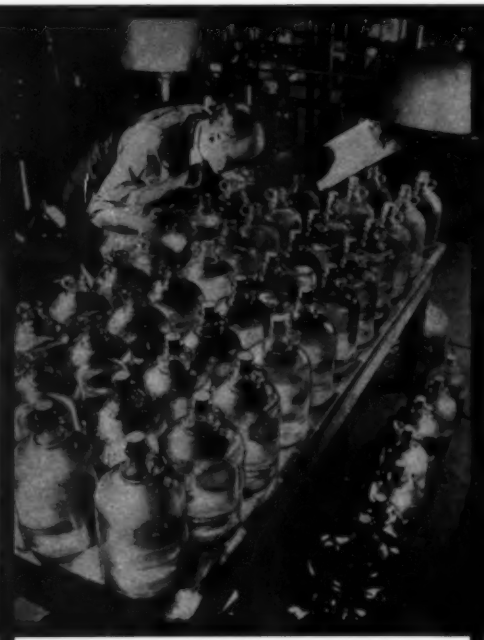


Through our associates in Geneva and Paris, L. Givaudan & Cie., you are kept informed of artistic trends and developments in the sophisticated world of fragrance on the European continent.

The skill and ingenuity of Givaudan perfumers, demonstrated in creations recognized throughout the world for their originality and success, are always available to Givaudan customers.



As the world's largest producer of perfume chemicals, Givaudan has developed facilities and techniques that permit volume production under rigid quality control.



Givaudan offers you the widest variety of aromatic materials from a single source. You have the security of a continued supply and uniform quality.

For custom-made fragrances to fit your specific needs, Givaudan offers the cooperation of its perfumers, all top rank in creative skill and imagination.

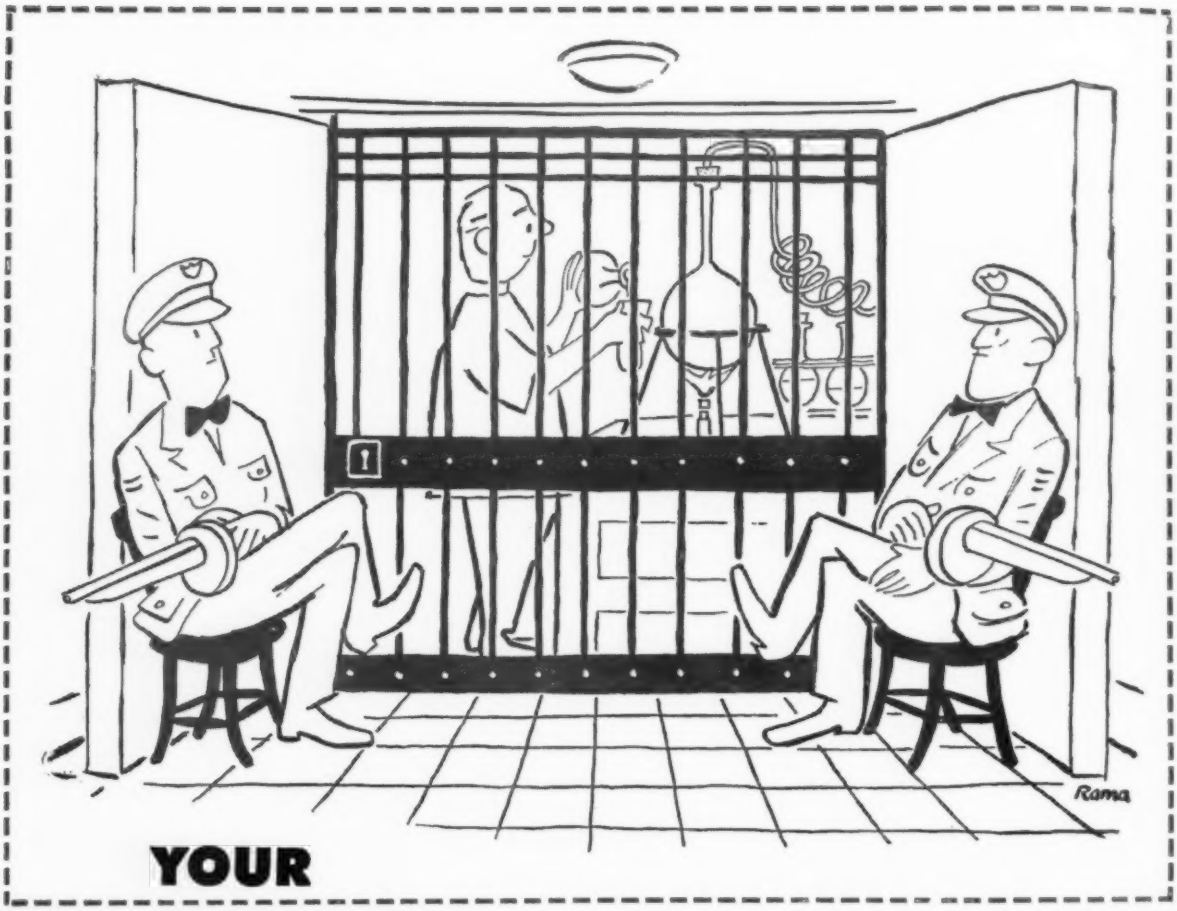
Creative imagination, backed by modern facilities, is one of the many special benefits Givaudan offers its customers.

GIVAUDAN

Better perfume materials through constant research and creative ability

GIVAUDAN - DELAWANNA, INC.
330 West 42nd Street · New York 36, N.Y.

Branches: Philadelphia · Boston · Cincinnati · Detroit
Chicago · Seattle · Los Angeles · Toronto



YOUR SPECIALTY CHEMICAL IS SAFE AT NYQ

Pharmaceutical manufacturers and other chemical users, small and large, know that their specialty chemical items are made exclusively and confidentially for them at NYQ.

Many of these chemicals do not appear in NYQ's catalogue simply because it is deliberate NYQ policy not to advertise special chemicals that we make for our customers.

Our customers have found that at NYQ they have all the security and privacy that they wish for in the manufacture of custom made raw materials. They have also found that NYQ can many times make these chemicals available for their use for much less than they could manufacture them themselves.

If you have a specialty chemical which you are manufacturing now, or considering manufacturing, let us show you what we can do for you. You can be assured that your confidence will be respected, and our research and production staff will devote themselves to your problem.

NYQ®

THE FULL LINE
FINE CHEMICAL HOUSE

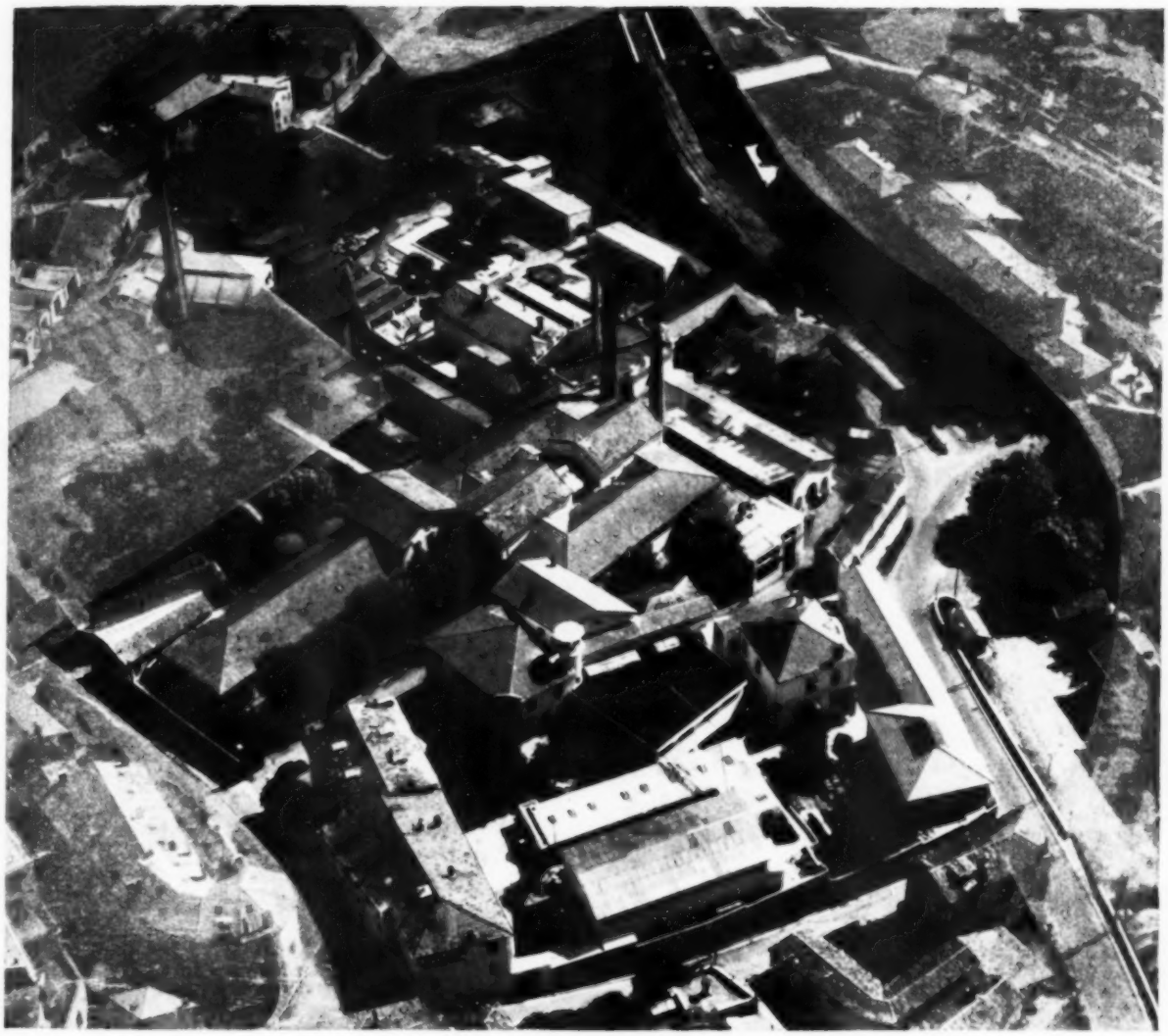
The NEW YORK QUININE & CHEMICAL WORKS, Inc.

GENERAL OFFICES: 50 CHURCH STREET, NEW YORK 8, N. Y. 729 WEST DIVISION STREET, CHICAGO 10, ILL.

LAUTIER FILS

"A Standard of Quality Since 1795"

GRASSE, FRANCE



Essential Oils

Natural Flower Absolutes **Concentrated Natural Fixatives**

Synthetic Aromatics

LAUTIER FILS, INC.

321 Fifth Avenue, New York 16, N. Y. • 874 North Wabash Avenue, Chicago, Ill.

GRASSE PARIS LONDON BEYROUTH ST. LOUIS SANTIAGO

SPECIFY STURGE

PCC

PRECIPITATED CALCIUM CARBONATE U.S.P.

For Dentifrices—Sturge PCC stabilizes your glycerine-water mixtures. Gives you a mild controllable detergent free from grit and taste.

For Pill and Tablet Coatings—Sturge gives you a high white color and uniform texture. It's neutral and free from taste.

For Powders—The ideal ingredient with a soft matte finish and fine texture. It maintains the delicacy of your scent. And you can be sure of uniform color.

For Fillers—To fill or pigment your lipsticks, creams and skin preparations.

The producer, John & E. Sturge, Ltd., of Birmingham, England, will meet your special density requirements. For a sample and further information write on your company letterhead to H. J. Baker & Bro.

Sole Distributor:

H. J. BAKER & BRO.

established 1850

600 Fifth Avenue
New York 20, New York

BRANCH OFFICES: BALTIMORE, MD. • CHICAGO, ILL. • SAVANNAH, GA. • TAMPA, FLA.

No. 8 of a series

PERFUME THROUGH THE AGES

Perfume distilling operation, from a 15th century woodcut.

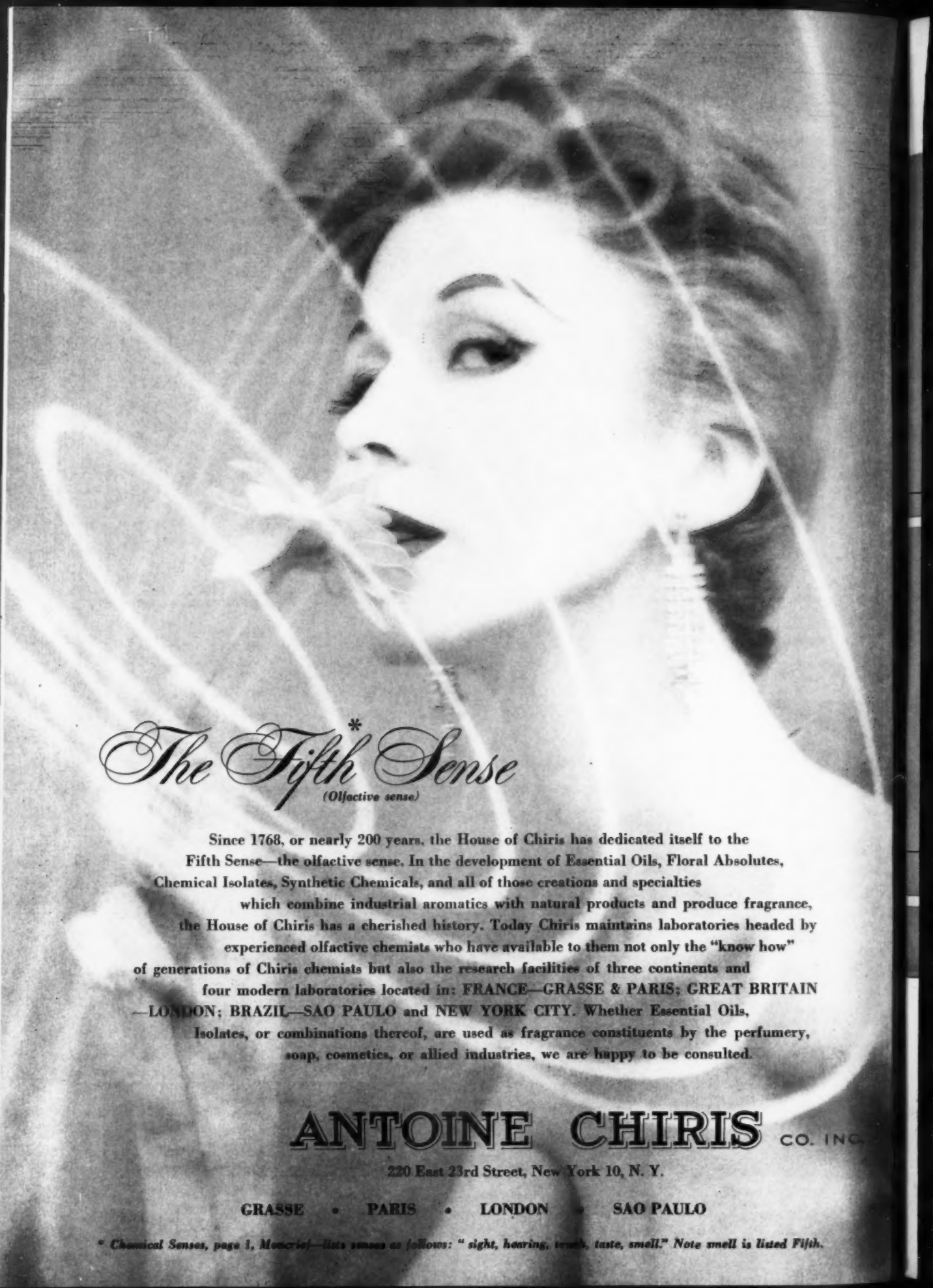
The advent of the Renaissance, that sweeping cultural re-awakening of Europe, also brought a momentous change to the art of perfumery. Prior to the 15th century, fragrances were primarily spicy in character . . . their most important application, apart from religious ritual, being to cover unpleasant odors. With the new cultural climate however, perfumes gained great popularity as decorations or adornments, and floral types became a prevailing vogue. The delicate flower fragrances still hold their traditional appeal, though cost often prohibits use of the absolute. In the D & O Perfume Laboratories, this problem is solved by the development of fine synthetics such as the beautiful new compound, JASMALIA. A Jasmin specialty of unusual character, JASMALIA recreates with authenticity the special properties of this important oil . . . one of the loveliest of our floral heritage.

D&O ESTABLISHED 1798 ®

Our 155th Year of Service

DODGE & OLCOTT, INC. 180 Varick Street, New York 14, N. Y.
Sales Offices in Principal Cities

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • FLAVOR BASES • DRY SOLUBLE SEASONINGS



The Fifth* Sense

(Olfactive sense)

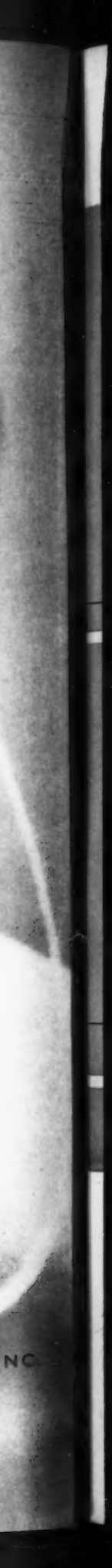
Since 1768, or nearly 200 years, the House of Chiris has dedicated itself to the Fifth Sense—the olfactive sense. In the development of Essential Oils, Floral Absolutes, Chemical Isolates, Synthetic Chemicals, and all of those creations and specialties which combine industrial aromatics with natural products and produce fragrance, the House of Chiris has a cherished history. Today Chiris maintains laboratories headed by experienced olfactive chemists who have available to them not only the "know how" of generations of Chiris chemists but also the research facilities of three continents and four modern laboratories located in: FRANCE—GRASSE & PARIS; GREAT BRITAIN —LONDON; BRAZIL—SAO PAULO and NEW YORK CITY. Whether Essential Oils, Isolates, or combinations thereof, are used as fragrance constituents by the perfumery, soap, cosmetics, or allied industries, we are happy to be consulted.

ANTOINE CHIRIS CO. INC.

220 East 23rd Street, New York 10, N. Y.

GRASSE • PARIS • LONDON • SAO PAULO

** Chemical Senses, page 1, Moncrief—lists senses as follows: " sight, hearing, touch, taste, smell." Note smell is listed Fifth.*



Stop the Eye...Start the Sale...

You've just made a sale. Her eye was caught by *your* product in its distinctive *blue* bottle and she's going to buy. That's not strange. Maryland Blue is a powerful salesman. It stops the eye in the store . . . invites use in window and counter displays . . . acts as a constant reminder in the home. It imparts to your product the integrity and quality that has been associated with blue through the centuries.

See for yourself why leading firms utilize Maryland Blue's rich color as an advertising, merchandising, and selling tool. Write for samples today. No obligation, of course.

MARYLAND GLASS CORPORATION, Baltimore 30, Maryland.

Pack to attract

in Maryland Blue

Also available in clear glass

A NEW PERFUME OIL
CONCENTRATE . . .

Cherine

– the lighthearted fragrance

Want to give your perfumes and toiletries new sell-ability? *Scent them with CHERINE!*
This light, gay, French-type fragrance is ideal for perfumes, toilet waters, stick colognes, sachets, powders, hand lotions and creams. Cherine's pleasing feminine fragrance appeals to youthful women of all ages. Its amazingly low price of $9.50 per pound makes it extremely economical to use in all of your cosmetics.
We'll be glad to send you samples for your own tests . . . no obligation, of course.

AROMATIC PRODUCTS, INC.

15 EAST 30th STREET • NEW YORK 16

CHICAGO • DALLAS • MEMPHIS • PITTSBURGH • LOS ANGELES • BOSTON

MEMBER • FRAGRANCE FOUNDATION

FOR ALL FORMS OF

VITAMIN B_{12}

LOOK FIRST TO MERCK

CRYSTALLINE VITAMIN B_{12} WITH INTRINSIC FACTOR CONCENTRATE U.S.P.

- Highly concentrated—50 mg. supplies 1 U.S.P. (oral) Unit.
- Light-colored, free-flowing powder.
- Approved by the U.S.P. Anti-anemia Preparations Advisory Board.

- **CRYSTALLINE VITAMIN B_{12} U.S.P.**
- **TRITURATIONS OF CRYSTALLINE VITAMIN B_{12}** (0.1% in either mannitol or dicalcium phosphate.)
- **VITAMIN B_{12} SOLIDS*** (Each gram equals 500 mcg. Vitamin B_{12} activity. Adjusted to uniform potency with dicalcium phosphate.)
- **VITAMIN B_{12} SOLIDS** *Type S** (Each gram equals 1,000 mcg. Vitamin B_{12} activity. Adjusted to uniform potency with mannitol.)

As a further aid in product development, Merck offers you technical information and service in formulating and producing Vitamin B_{12} dosage forms.

*Labeled potency is totally cyanocobalamin. "Cyanocobalamin" is used in a chemical sense only and not as a synonym for the U.S.P. product.

Research and Production for the Nation's Health

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

© Merck & Co., Inc.

Aliphatic Aldehydes

Aldehyde C 8 upto Aldehyde C 12
including C 11 undecylenic aldehyde
and C 12 methylnonylacetaldehyde

POLAK & SCHWARZ

Unexcelled quality

Ask for our pricelist for aromatic chemicals

Polak & Schwarz Inc., 667 Washington Street, New York - 14 (N.Y.)

NEED **NEW FACES** IN YOUR ORDER BOOK?

Stearic Acid (SP, DP, TP)
Oleic Acid (Red Oil)
Coconut Fatty Acid
Vegetable Fatty Acids
Sulfonated Oils
Monoglycerides
Hydrogenated Edible Tallow Flakes
Emulsifiers

● For a cream base for cosmetics or for high quality soaps, toiletries and shaving creams; Swift's Cosmetic Grade Stearic Acid is especially manufactured to meet your demands for your most exacting customers and prospects.

Swift's modern and unique processing facilities make possible the *selective* extraction of color bodies and other impurities. The resulting product can be depended upon to conform to specifications and be reliable in use. Its good odor, stability of color, and resistance to heat make Swift's Cosmetic Grade Stearic Acid ideal for routine as well as highly specialized production requirements.

Swift's single, double and triple pressed Stearic Acids are readily available from Swift & Company warehouse facilities throughout the U.S. They are but one branch of Swift's family of industrial oils and fatty acids that are daily serving diversified industrial needs. Check over the listing at left and write for further information on any of the many specialized Swift's products for the drug and cosmetic industry, and remember . . .

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS

Call Swift for INDUSTRIAL OILS and FATTY ACIDS

Another of Swift's Products for Industry

USE THIS COUPON FOR FURTHER INFORMATION

Swift & Company, Industrial Oil Dept.
1836 165th Street
Hammond, Indiana

Please send data on the following products:

_____

_____

Name _____ *Title* _____

Company _____

Address _____

City _____ *Zone* ____ *State* _____

D-7D

Notes from the makers of
Myvax Vitamin A

Vitamin A palmitate in the book

Every once in a while somebody comes up with something that doesn't raise much dust at the moment but turns out to be of considerable importance in the long run.

Vitamin A palmitate, for example.

We ran across it back in 1938 when we were distilling some Norwegian cod-liver oil in a molecular still—a speciality of the house. We found that from the collection of fatty acid esters which constituted the vitamin A in this oil, we were able to pull out three percent as the palmitate. *The Journal of Biological Chemistry* obligingly published the 2½-page paper we wrote about our discovery.

That wasn't exactly a bombshell at the time; but now almost everyone who puts vitamin A in his product uses some palmitate.

We don't make much vitamin A by molecular distillation any more. Most of it is synthesized by a method we worked out some time back. The process is efficient, the product tastes good, the potency is high. We can ship as much as you want from stock, as Myvax Vitamin A Palmitate, Myvax Vitamin A Acetate, or Myvapack Vitamin A in batch-sized cans. If you run into any trouble putting vitamin A into your product or want to know something about how it will act when eaten, we'll be glad to help there, too.

To find out more about our vitamin A, prices or facts, write to ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • W. M. Gillies and Company, Los Angeles and San Francisco • Charles Albert Smith Limited, Montreal and Toronto.

"Myvax" and "Myvapack" are trade-marks.

leaders in research and production of vitamin A

DPi

Also . . . vitamin E . . . distilled monoglycerides . . . more than 3500 Eastman Organic Chemicals for science and industry

Distillation Products Industries *is a division of* **Eastman Kodak Company**

RESEDALIA

AN ACETAL

PHYSICAL APPEARANCE:	Colorless liquid; APHA 10 Max.
ODOR TYPE:	Floral; resembles Reseda Mignonette.
SOLUBILITY:	10 parts soluble in 100 parts 70% Ethyl Alcohol.
STABILITY:	Very stable in neutral and alkaline media.
REFRACTIVE INDEX:	1.4972 (R.I. n $\frac{20}{D}$)
SPECIFIC GRAVITY:	$\frac{20}{20}$: 1.0020
SUGGESTED USES:	1% to 5% in formulation of floral odors for perfumes, creams, powders and soaps. As addition, ¼% to 1%, to existing compounds to round off and improve odor character.
QUALITY:	Held to rigid specifications by our control laboratories; carefully analyzed by the most modern methods, including infra-red absorption.

Note these additional VERONA specialties:

BERGAMOT SYNTHETIC P-1104 • CYCLAMAL

VERONOL • FLOWER OIL WHITE LILAC

Sole representatives in the United States for: J. & E. SOZIO, GRASSE, FRANCE

RESINOIDES • NATURAL ABSOLUTES • ESSENTIAL OILS

PRODUCTS BUILD SALES FOR YOUR PRODUCTS

Aromatics Division

VERONA CHEMICAL COMPANY

Plant and Main Office: 26 Verona Avenue, Newark, N. J.

1210 Rosedale Avenue, Chicago, Ill.

CASE HISTORY V-496-C

CASE HISTORY V-496-C
THE CLIENT: A research chemist who wanted production of a multi-vitamin product that was clinically tested.
THE PROBLEM: Perfect an original, stable solution of an organic complex multi-vitamin, and devise an economical method of manufacture.
RESULTS:
A. Within three weeks after we started on the problem, working with the client, the formula was completed.
B. After two months of accelerated tests, the formula was passed.
C. Packaging and production were developed so that today our client is in "big business" and has come back several times for help in developing new products.
Let us help you with your special formula..developed in confidence.. production planned and deliveries guaranteed!

STRONG, COBB & COMPANY, INC.

2654 Lisbon Road, Cleveland 4, Ohio

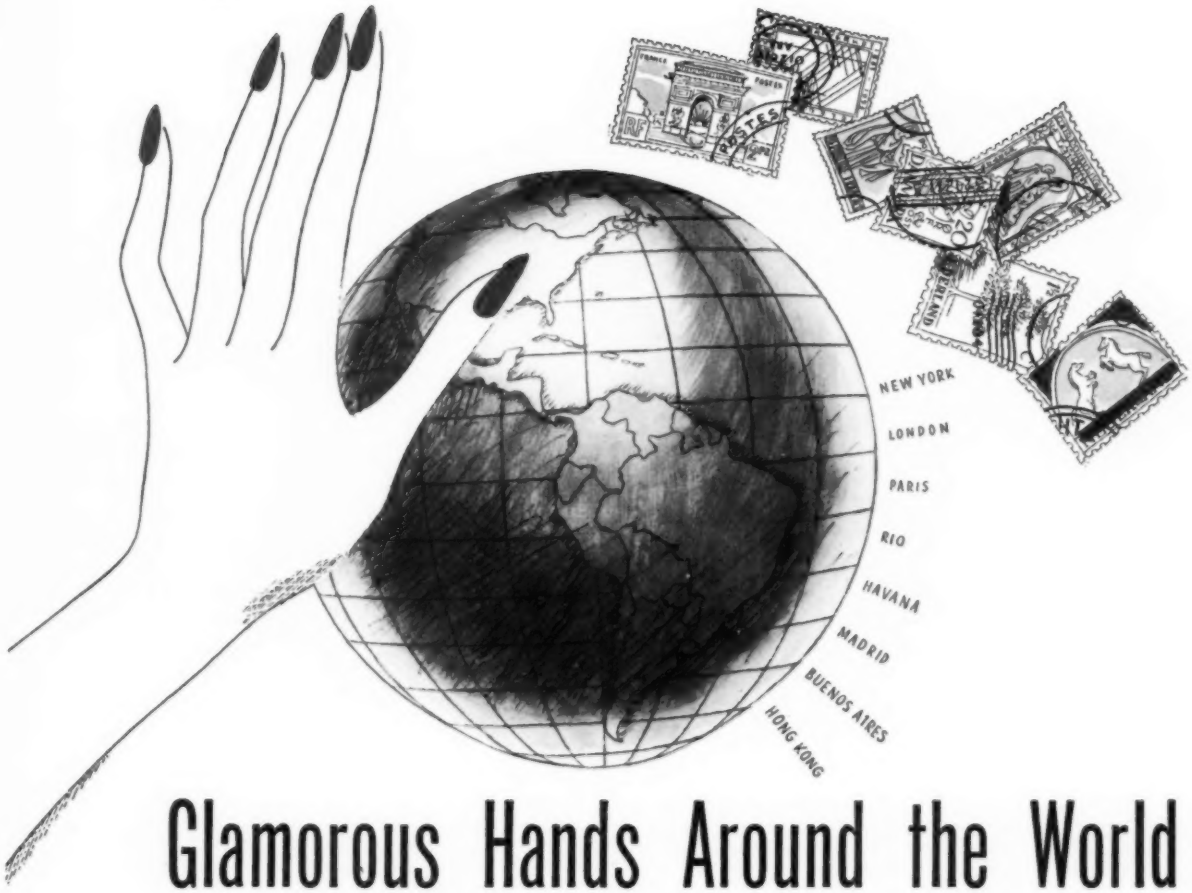
In New York: 745 Fifth Avenue, New York 19, N. Y.

In California: 12912 Chadron Avenue, Hawthorne, California

In Canada: Strong, Cobb of Canada, Ltd., 388 St. Paul Street, W., Montreal

American Chlorophyll Division, Lake Worth, Florida

PHARMACEUTICAL MANUFACTURERS TO THE TRADE—SINCE 1833



Glamorous Hands Around the World Call For the Foremost Name

DURLIN *for bulk nail enamel*

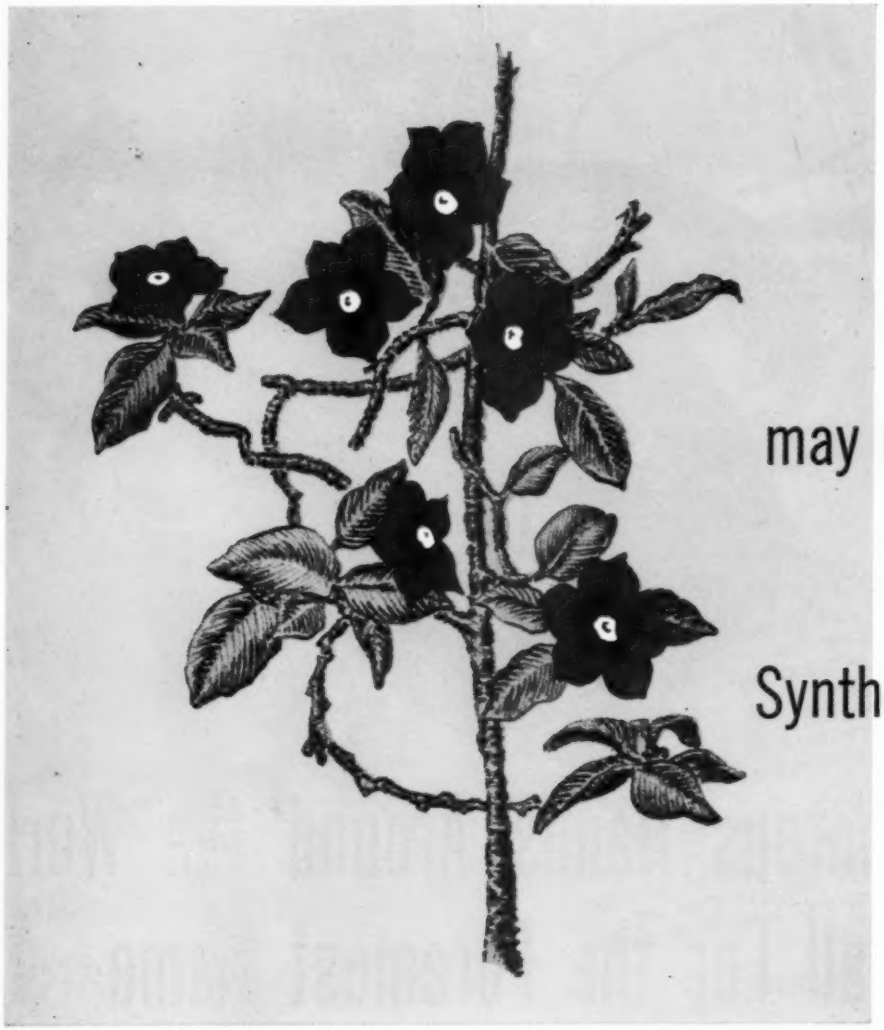
DURLIN is the Foremost Name in BULK NAIL ENAMEL catering to the leading class packagers the world over. Durlin is first in quality, first in fashion-right colors, first in technical and packaging service.

glamorous hands around the world . . .

DURLIN CO.

744 Broad Street, Newark 2, N. J.

Cable Address: Durlin Newark Newjersey



Brunfelsia may remind you of **DREYER** Synthetic Scents

Have you met this "Lady of the Night," this great beauty, *Brunfelsia*..."The Flower of Unforgettable Fragrance?" It's intense, and yet, it's delicate. It's light, and yet, it lasts. Dreyer has not duplicated this rare scent, but Dreyer does duplicate Nature, with many distinguished floral scents. Re-creations by Dreyer really *re-create* all the characteristics of natural flower odors. It is hard to distinguish a Dreyer Synthetic Floral Creation from the original it has copied. There's one difference, though. Dreyer Perfume Concentrates are often more stable, longer-lasting than the originals. They save you money. Send today on your letterhead for samples.

FLAVORS
ESSENTIAL OILS
AROMATIC CHEMICALS

depend on *Dreyer* **for**

P. R. DREYER, Inc. 601 WEST 26th STREET, NEW YORK 1, N. Y.

American Distilled Oils

Produced at our Brooklyn Factory

OILS

CLOVE	STYRAX	GERANIOL	PIMENTO
NUTMEG	CASCARILLA	CITRONELLOL	OLIBANUM
ORRIS LIQUID, Conc.	BALSAM PERU	OPOPONAX	SANDALWOOD
	CELERY		PATCHOULY

also LINALOOL • CITRAL • EUGENOL • RHODINOL

RESIN LIQUIDS

OLIBANUM	ORRIS	STYRAX
LABDANUM	BENZOIN	BALSAM PERU
OPOPONAX	TONKA	BALSAM TOLU

Essential Oils • Aromatic Chemicals • Perfume Materials • Colors

69 *Years of continuous quality service — suppliers and manufacturers of*

Essential Oils • Aromatic Materials • Flavors • Colors

GEORGE LUEDERS & CO. NEW YORK GL REGISTERED TRADE MARK

GEORGE LUEDERS & CO.

427 WASHINGTON ST., NEW YORK 13, N. Y.

Chicago • San Francisco Montreal • Philadelphia • Toronto

Established 1885

Harvesting the flowers

OILS OF

Lavender

AND

Lavandin

FROM OUR

REVEST PLANT

BASSES-ALPES, FRANCE

Bringing the harvest to the distillery

Loading the flowers into the stills

Distillation in progress

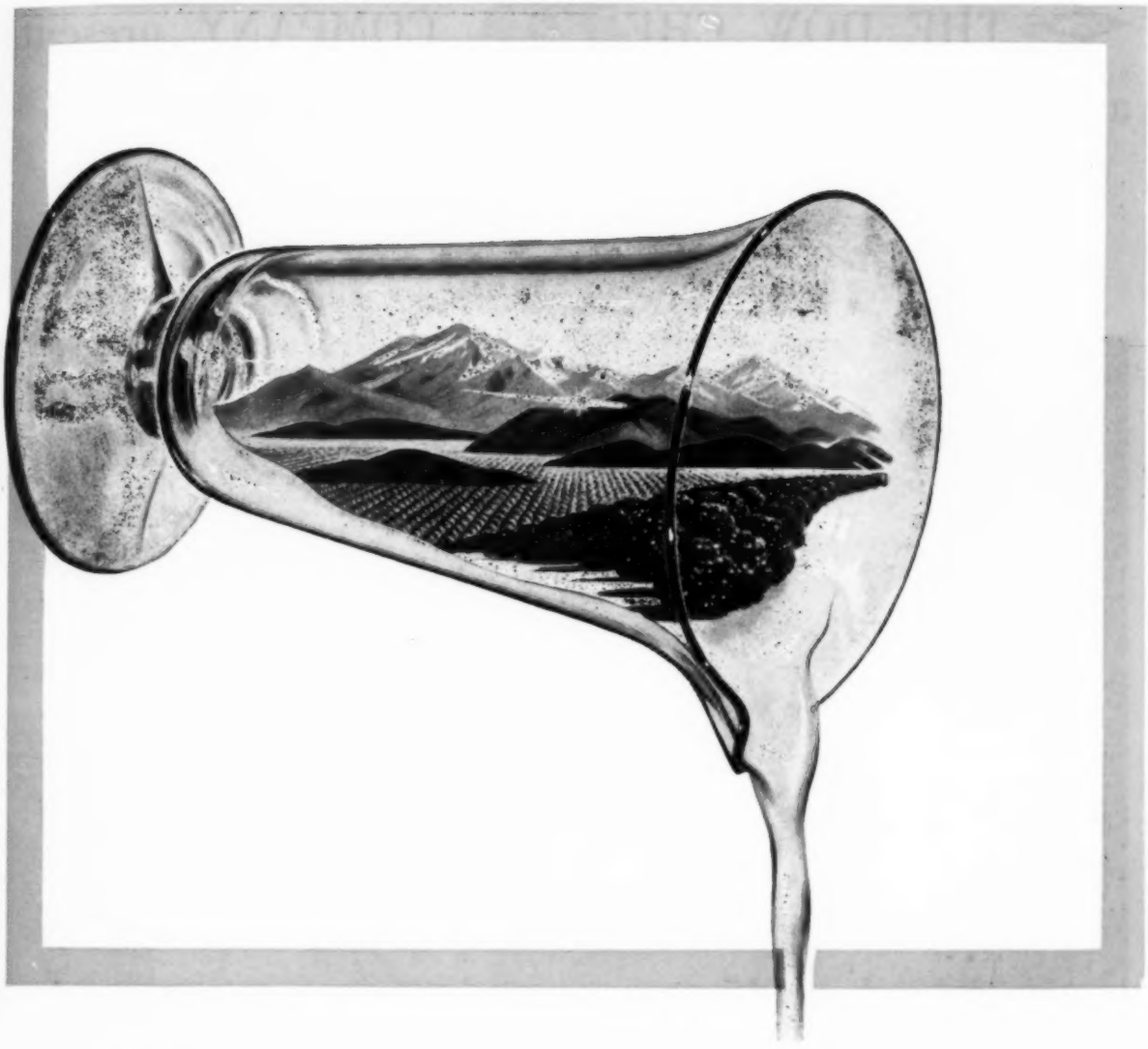
Bertrand Freres offers an entire range of floral absolutes, resinoids and essential oils. We welcome your inquiries on any specific product or process.

Removing the spent flowers from the stills

B F TRADE MARK

Bertrand Frères, Inc.

443 FOURTH AVENUE NEW YORK 16, NEW YORK



THE LEADING ORANGE OIL WITH CALIFORNIA FLAVOR

There's a reason for the growing popularity of Exchange Oil of Orange. Only Exchange Brand combines the flavor and aroma of California oranges with *Exchange* quality. Carefully selected oranges from the famous California groves of Sunkist Growers are processed to scientific specifications in modern California plants. You receive distinctive flavor and fragrance... in addition to unmatched uniformity of strength.

Sunkist Growers
PRODUCTS DEPARTMENT • ONTARIO, CALIFORNIA

Produced by
The Exchange Orange Products Co.
Ontario, California

Distributed in the U. S. exclusively by
FRITZSCHE BROTHERS, INC.
76 Ninth Ave., New York 11, N. Y.
DODGE & OLCOTT, INC.
180 Varick St., New York 14, N. Y.

Exchange
OIL OF ORANGE U. S. P.

DOW THE DOW CHEMICAL COMPANY presents

a great new dramatic television program . . .

MEDIC

It's unusual to talk about a television program in this magazine, but we wanted you, our customers and friends, to hear about MEDIC first . . . we honestly believe it to be the most exciting new dramatic production in years . . .

Startling in its realism and honesty, MEDIC is based on case histories and carries the official endorsement of the Los Angeles Medical Association; produced under their technical supervision by Worthington Miner, originator of *Studio One;* created and written by *Dragnet* writer, James Moser. Don't miss the first performance September 13! The Dow Chemical Company, Midland, Michigan.

See MEDIC Monday Nights 9 to 9:30 EST, NBC-TV DOW

WARDIA IS ACKNOWLEDGED BY THE WORLD'S LEADING PERFUMERS TO BE THE FINEST OF ALL ROSE SPECIALTIES

FIRMENICH & CIE.
SUCCESSEURS DE
CHUIT, NAEF & CIE.
GENEVE SUISSE

FIRMENICH INCORPORATED

250 WEST 18TH STREET, NEW YORK 11 • FIRMENICH OF CANADA, LIMITED, 348 WALLACE AVENUE, TORONTO • CHICAGO OFFICE: 612 NORTH MICHIGAN AVENUE • GENEVA • PARIS • LONDON

FIRMENICH . . .

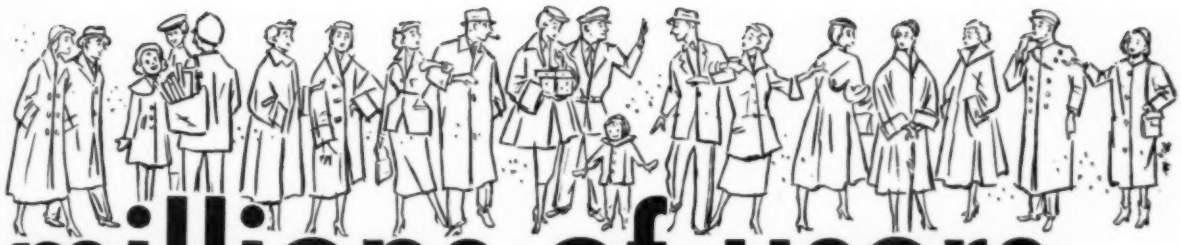
AND THE

SCIENCE OF FRAGRANCE

It is gratifying to us that our ethical contribution to fragrance creations helps so many perfumers achieve originality and distinction in their products. In their use of specialties by Firmenich, they enjoy working with basic materials of the highest fidelity, concentration and olfactive purity. To the science of fragrance, and to those whose skill and imagination keep it ever exciting and constantly expanding, Firmenich continues its contribution by new discoveries and development.

FIRMENICH
INCORPORATED

250 WEST 18TH STREET, NEW YORK 11 • FIRMENICH OF CANADA, LIMITED, 348 WALLACE AVENUE, TORONTO • CHICAGO OFFICE: 612 NORTH MICHIGAN AVENUE • GENEVA • PARIS • LONDON



millions of users...

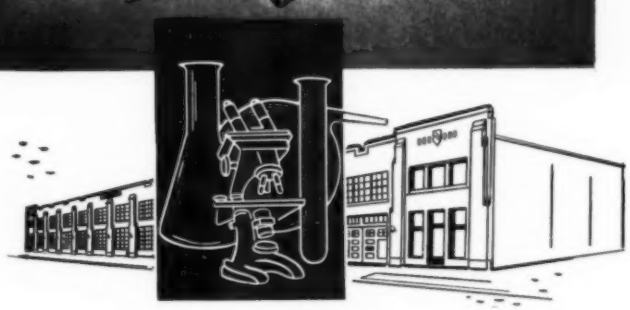
... of Famous Brand Cosmetics and Kolar Perfected Formulas— know nothing about our organization.

KOLAR merchandises no products so does not compete with its clients.

Formula secrets are strictly guarded.

KOLAR concentrates its chemical skill, forty-four years experience and fine equipment in developing and/or manufacturing your product.

KOLAR is fully equipped to render a complete service—at attractive costs—including manufacturing and packaging, as well as a central location for warehousing and shipping.



For further information . . . address
GEORGE G. KOLAR, *President*

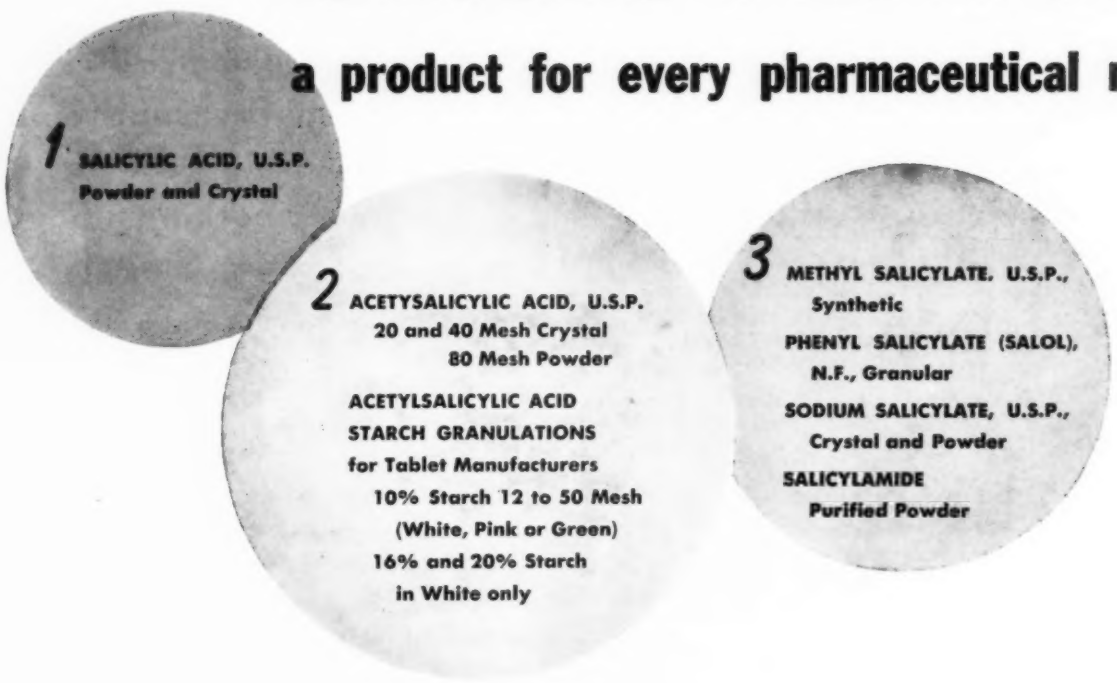
KOLAR LABORATORIES, INC.

7475 NORTH ROGERS AVENUE • CHICAGO 26, ILLINOIS

Depend on Baker for

SALICYLATES

a product for every pharmaceutical need



Look at the *complete* line of Salicylates which Baker can supply you. Among these Salicylates, there is one (or more) ideally suited for *your* pharmaceutical manufacturing need.

For a half century, Baker has built its chemical business on measured purity. That is why leading pharmaceutical and drug companies rely on Baker as a source of supply.

If you buy any of the Salicylates listed above, let us submit samples and prices. It's good quality insurance for *your* products. Address: *Fine Chemical Division*, J. T. Baker Chemical Co., Phillipsburg, N. J.

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

Keeping Posted

Curbing Multiple Seizures

The power of the Food and Drug Administration to make multiple seizures under certain conditions has been stripped from the Food, Drug, and Cosmetic Act under the Title 21 of the United States Code, which is the name of the bill passed by Congress in the closing days of the recent session. Since Title 21 replaces the Food, Drug, and Cosmetic Act, as well as other laws having to do with foods and drugs, it overrides the Food, Drug, and Cosmetic Act which is repealed by the new bill.

In Title 21, there is eliminated from the previous Food, Drug, and Cosmetic Act the provision which permits multiple seizures for misbranding when the Secretary has probable cause to believe from the facts found, without hearing, that the misbranded article is fraudulent or would be in a material respect misleading to the injury or damage of the purchaser or consumer. Left in the bill is the provision to make multiple seizures in cases where it is a previous judgment for the United States or where the article is dangerous to health.

The multiple seizure provision which has been eliminated was involved in the Mytinger & Casselberry case which involved alleged misbranding of the vitamin-mineral food supplement, Nutrilite. In this case, a three-man court in Washington castigated the Food and Drug Administration for its abuse of power and persecution of the defendants. However, the U. S. Supreme Court ruled that the Trial Court had no reason to go into these matters and merely upheld the constitutionality of the law. Shortly after this, a bill was introduced in Congress to take this seizure power away from the FDA, but it got nowhere. Now however, it appears that totally unwarranted abuse of power by the FDA in the Mytinger and Casselberry case has not been forgotten and is coming home to roost.

Radioactive Silicones

Abbott Laboratories and General Electric Company's Silicone Products Department have completed a project making radioactive silicones available for medicine and industry. According to Abbott officials, radioactive silicone fluids are made readily measurable in minute amounts by incorporation of C-14, and are expected to offer a clearer insight into the behavior of silicones in the body. These fluids have been designed exclusively for laboratory and clinical test work. The project at Abbott is under the direction of Dr. Donalee L. Tabern, head of the Abbott Department of Radioactive Pharmaceuticals.

Pharmacy and Disease

Why we live longer, and how the once deadly diseases have been conquered by the "wonder drugs" will be discussed at a special scientific congress to be held at Columbia University, New York, on October 14 and 15. This Bicentennial Conference entitled Pharmacy and the Conquest of Disease, will be dedicated to the major advances made in recent years in the treatment of disease and in public health and to a forecast of future research developments. It is a part of the year-long observance of the bicentennial of the university and a tribute to the hundred and twenty-fifth anniversary of the founding of Columbia's college of pharmacy.

George W. Merck, chairman of the board of Merck & Co., is national chairman of the College of Pharmacy's bicentennial conference national committee. This committee consists of many outstanding figures in civic, industrial, and professional circles, as well as leaders in medicine, pharmacy, and the public health field.

The Bicentennial Conference will place particular emphasis upon reviews of the many advances made in recent years in successful treatment of cancer, heart disease, insanity, and infectious diseases. The problems of nutrition, old age and the degenerative diseases will also be considered, with emphasis upon the many new drugs which within this century have extended man's life span more than 25 years.

Six leading research authorities in these medical and scientific fields will review the past decade's progress in diagnosis and treatment. They will show how research has revolutionized therapy in their respective fields and markedly decreased mortality from these diseases.

Several outstanding economists and experts in health care and information will discuss the economic and social importance of those drug discoveries in terms of dollar value and human care. Products of drug research, they say, have resulted in lowered death rates, longer life, lessened incidence of disease, lower costs of medication, and shortened convalescence after disease. The closing session has been dedicated to the role of pharmacy in public health. While the profession and

VITAMINS

Cyanamid is one of the important producers and distributors of vitamins in bulk.

B_1—Thiamine HCl U.S.P.
Oral and Parenteral

B_{12}—Crystalline U.S.P.
(Cyanocobalamin)

0.1% Trituration with Calcium Phosphate Dibasic

0.1% Trituration with Mannitol

B_{12} Solids
for Oral Preparations

Calcium Pantothenate
(Dextro)

Choline Bitartrate

Choline Chloride

Choline Dihydrogen Citrate

Tricholine Citrate

Folic Acid U.S.P.

Nicotinamide U.S.P.

Nicotinamide HCl

Nicotinic Acid U.S.P.

Pyridoxine HCl

Riboflavin U.S.P.

ANTIBIOTICS

Neomycin
Penicillin
Streptomycin
Dihydrostreptomycin

SULFONAMIDES

Sulfadiazine U.S.P.**
. . . Sulfa Drug of Choice
Sulfamerazine U.S.P.**
Sulfanilamide U.S.P.
Sulfathiazole U.S.P.**
Sulfapyridine N.F.**
Sulfabenzamide**
Sulfaguanidine U.S.P.
Sulfamethazine
(for human use)
Sulfacetamide**
Phthalylsulfacetamide

OTHER PRODUCTS

Aminoacetic Acid N.F.
Bishydroxycoumarin U.S.P.
Cinchophen N.F.**
Neocinchophen U.S.P.
Heparin Sodium U.S.P.
Methylene Blue N.F.
***N*-Acetyl-*p*-Aminophenol**
Para-Aminosalicylic Acid***
Propylthiouracil U.S.P.
Metallic Stearates—AERO* brand
Certified Colors for
Pharmaceutical Use

VETERINARY PRODUCTS

2-Amino-5-Nitrothiazole
Phenothiazine N.F.
(regular and drench grades
for veterinary use)
(also sulfas above)

*Trade-Mark
**and sodium salt
***with sodium or calcium salt

In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.

American Cyanamid Company

FINE CHEMICALS DIVISION
30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

CHICAGO: 3505 NORTH KIMBALL AVE. (18)
PHILADELPHIA: 401 NORTH BROAD ST. (8)
DETROIT: 931 FISHER BUILDING (2)
LOS ANGELES: 2300 S. EASTERN AVE. (22)
ST. LOUIS: 5025 PATTISON AVE. (10)

DISTRIBUTED IN CANADA BY NORTH AMERICAN CYANAMID, LIMITED · MONTREAL: P. O. BOX 6120, MONTREAL, P. Q. (5550 ROYALMOUNT AVENUE, TOWN OF MOUNT ROYAL) · TORONTO: ROYAL BANK BUILDING.

industry's contributions will receive attention at this time, the entire seminar is especially intended as a tribute to the practicing pharmacist, "the scientist on the corner."

The conference will be held in the university's McMillin Theatre, 116th Street and Broadway. Hundreds of leading figures in medical, scientific and pharmaceutical fields, as well as representatives of the government and the public are expected to be in attendance.

Fluoridate 6000th Community

Last month, Osawatomie, Kansas, became the 1,000th community in the United States to fluoridate its water supplies. Osawatomie is a farming community of 4,347 persons, 45 miles southwest of Kansas City. On the occasion, the president of the American Dental Association described fluoridation of water supplies as "one of the great public health measures of our time."

Dr. Fred A. Richmond, secretary of the Kansas State Dental Association, reported that some 18 million persons are now included in the program for prevention of dental decay. In addition, he said, three and a half million persons live in areas which for generations have been served by water supplies containing fluorides naturally in desirable amounts.

Dr. Leslie M. FitzGerald, A.D.A. president, said that "All kinds of irresponsible charges have been leveled against fluoridation. They have been the product of a handful of misguided or misinformed or self-seeking individuals. The fact is that not a single charge against the program has withstood the test of scientific investigation."

Wheeler Defends Orange No. 1

Walton M. Wheeler Jr., vice-president and general counsel of Eli Lilly and Company, defended the use of the certified color, FD & C Orange No. 1 before the Food, Drug and Cosmetic Law Division of the American Bar Association, suggesting that Food and Drug Administration approval of the dye should not be withdrawn.

Addressing the group in Chicago on August 17, Mr. Wheeler told the lawyers that the FDA pharmacologist had expressed the opinion that FD & C Orange No. 1 "is not a harmless coal tar color."

The Health, Education and Welfare Department is studying a report by an FDA pharmacologist concerning an experiment in which the dye was given to laboratory animals in various concentrations, with the highest concentration proving to be toxic. The FDA ordered the investigation when a child was reported to have developed a stomach ache after eating Halloween candy containing the dye.

Mr. Wheeler told that the concentration of the dye in Halloween candy was shown to exceed that normally found in food. He also pointed out that the amount of dye taken in an average daily dose of medicine would be "only an infinitesimal fraction" of the amount which was *harmless* to animals in the FDA pharmacology tests. He argued that the safety of a substance is related to the concentration used.

"In all pharmacological studies," said Mr. Wheeler, "quantities or concentrations of the tested substances are increased until the test animals show injurious results. Dangerous doses, quantities, or concentrations are thus determined. By comparing the results . . . questions of safety and toxicity are determined."

Mr. Wheeler said that before Secretary Hobby took such a step as limiting the use of FD & C Orange No. 1 to external preparations "more evidence than a mere Halloween stomach ache and pharmacological studies conducted with no apparent reference to customary conditions of use" should be offered.

PVP Plasma Expander Available

The Food and Drug Administration has granted permission for the commercial sale of the synthetic plasma expander PVP-Macrose. Heretofore use of the product has been restricted to stockpiling for national emergency use. The new ruling means that PVP-Macrose may be sold to and used by physicians, clinics and hospitals for emergency treatment of individual shock cases when used in accordance with FDA regulations. Schenley Laboratories, which sold 1.2 million pints of the plasma expander to the Federal Civil Defense Administration in 1952, has a large stock of material already bottled and ready for commercial distribution, according to Schenley president R. Blayne McCurry.

PVP-Macrose, developed in Germany during World War II and successfully used in the treatment of more than 500,000 shock cases, has undergone extensive research at leading clinics and hospitals in the United States for the past three years.

The Mysterious East

(With apologies to the New Yorker)

Manufacturing Pharmacist and Manufacturers' Representative

NIHON EISAI CO., LTD.

Cable Address: EISAI Tokyo
Telephone: (82) 2181-6

Branches: Osaka, Nagoya, Sapporo, Fukuoka

Factory: Honjo, Saitama Prefecture

88 Takehaya-cho, Bunkyo-ku, Tokyo, Aug. 5th 19 54

Dear Sir;

I've the honour to write to you. I am a member of Research Dept. of some pharmaceutical company of Japan.

My job is, in a few words, to analsis not only market but also tendency of the world, especially U.S. which is my minor country in every part of businesses.

Such being the case, I have many chances to read foreign literatures, and so I could have the pleasure to read your "Increasing the Detail man's productivity in "Drug and Cosmetic Industry, June '54."

To be sure, I am anxious to get such information as that, and so I read and read out and out every sentences.

In general I beg your pardon to say the following;

1. I was at a loss to understand what you would like to say in a long run.
2. The relation among management, advertising, and sales, what we might say "Team" - something like that- is not distinctive at all.
3. All is written in prose, so the whole of your sentences is without coordination.
4. Some are concrete expressions in itself and some are abstract ones.

A thousand pardon for my rudeness. If you deal leniently with me, I would be very pleased.

In conclusion, if you write something about your opinion to me, I would be much pleased.

Yours truly

Fumio Matsuo

P.S. My address is:

c/o Nihon Eisai Co., Ltd. Research Dept.
88 Takehaya-cho, Bunkyo-ku, Tokyo, Japan

To improve your shampoos and rinses

TRITON AS-30 or AS-35 ... for shampoos

. . . are good starting points for making better shampoos. Reason: They are sodium lauryl sulfate compounds with excellent foaming quality. With TRITON AS-30 or AS-35 you can formulate clear liquid, lotion cream, or paste products by varying the active ingredients. TRITON AS-30 and AS-35 are manufactured from our own fatty alcohols—your assurance of uniformity from raw material to finished products.

TRITON X-400 ... for creme rinses

If your current research is pointed toward creme hair rinses, then we suggest TRITON X-400 for further study. It is a heavy paste based upon a cationic quaternary ammonium compound and a higher alcohol.

Use TRITON X-400 to gain these results—softer, more lustrous, manageable hair. We think you'll find we've succeeded in giving you a hair rinse ingredient that is easy to formulate and kind to your customers' hair.

COMPLETE FORMULATING INFORMATION WILL BE SENT UPON YOUR REQUEST.

TRITON is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.

Chemical Progress Week May 17-22

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

U. S. Industrial Chemical Line-Up

The sale of the antifreeze, resin, and insecticide activities of the U. S. Industrial Chemical Division of National Distillers Products Corporation, does not indicate any lessening of interest of the company in the chemical field, according to a recent announcement which explains that this is merely a reorientation of the company's chemical program to meet certain long-term objectives, which include integration of its chemical activities.

The recently announced sale of the Insecticide Division and the Fairfield (Baltimore) plant did not include the sale of other products such as methionine, ethyl acetate and esters, ethyl acetoacetate and arylids, ether, and ethylene. These operations will be continued at Fairfield until National constructs new facilities at other locations.

Also, National Distillers is installing natural gas reforming equipment at its Tuscola, Illinois, plant to expand its ammonia capacity to 60,000 tons a year by mid-1955. New denaturing units are being designed for Newark, N. J., and Iuscola, Ill. A new pilot plant building is also being constructed at Cincinnati.

National Distillers plans to continue and expand its operations in the following fields:

1. Metallic sodium and its derivatives, such as ethyl acetoacetate and the related compounds, the arylids, the new products, isosebacic acid, recently developed by National's Research Division.
2. Raw materials for the fertilizer industry, including sulfuric acid, ammonia, nitrogen solutions.
3. Petrochemicals, such as alcohol, ether, ethyl chloride, with polyethylene scheduled for early 1955. These come from the 60 per cent owned subsidiary, National Petro-Chemicals Corporation.
4. Alcohol and derivatives, butyl alcohol and derivatives, solvents, etc. In addition to synthetic alcohol from Petro, the company has fermentation facilities at New Orleans and at Anaheim, Calif.
5. Feed supplements which National will manufacture and market directly to the pharmaceutical and animal feed manufacturers. These include methionine, riboflavin, niacin, vitamin B_{12}, distillery by-products, etc.

By the end of this year, the company will have $70 million invested in chemical industry facilities, 85 per cent of which is less than five years old. All chemical sales will be handled by the U. S. Chemicals Division.

Substitution Opinion

Retail pharmacists whose concern about the current trade problem of product duplication causes them to engage in substitution and to support the "A.R.B. Scheme" ("any reliable brand" dispensing) are opening themselves to possible criticism for unprofessional and uneconomic practices, Dr. John N. McDonnell, vice-president of Schering Corporation recently told the Pennsylvania Pharmaceutical Association in his report as chairman of the Association's Trade Relations Committee.

Citing the opinion that the use of generic names is justified equally to that of trade-marks and brand names, Dr. McDonnell pointed out that conversely the "A.R.B. Scheme" is fundamentally unprofessional and harmful to the prestige of the professions and the best interests of the public. "The approval of substitution represented by the 'A.R.B. Scheme' would inevitably be detrimental to interprofessional relations, trust and cooperation and the interrelationship of the pharmaceutical profession and industry," the committee's report stated. Moreover, the scheme would have an adverse economic effect on pharmaceutical and medical research and would appear destined to invalidate fair trade through destruction of brand names.

Schering Research Set-up

Schering Corporation, which spent nine per cent of its total receipts from sales in 1953 on research, has created four new divisions in this expanding laboratory research program. Reporting to Robert E. Waterman, vice-president in charge of Research, the new divisions are Biological and Therapeutic Research; Medicinal and Pharmaceutical Research; Chemical Research and Development; and a Division of Research Services.

Dr. Edward C. Reifenstein, Jr. will direct Biological and Therapeutic Research, including bacteriology, investigation of living tissues, and initial administration of drugs in human beings.

Administration of the Division of Medicinal and Pharmaceutical Research will be handled by Dr. S. W. Lee who also assumes responsibility for coordinating the conjoint efforts of the chemical and biological groups.

Chemical Research and Development, including the field of bio-synthesis, is under the direction of Dr. E. B. Hershberg who has made outstanding contributions in the field of steroid hormones and has pioneered in new production technics for production of cortisone, hydrocortisone and new compounds having cortical activity.

The new Research Services Division, headed by Dr. Bradley Whitman, assumes general responsibility for budgeting and service functions of the research and development activities of all of Schering's investigative work.

To investigate and coordinate research outside Schering's own laboratories, Dr. Domenick Papa has been named assistant to the vice-president, with responsibility for patent administration and scientific contacts throughout the world. Dr. Papa, a Fritzsche Brothers fellow in organic chemistry at Columbia University, is co-inventor of Chlor-Trimeton and Prantal, Schering's anticholinergic compound for peptic ulcer.

Lilly Expands Vaccine Output

In the United States there are 55 million children under eighteen, and another 50 million adults from 18 to 40, and it is in their ranks that polio most frequently strikes, points out Eli Lilly and Company, who has completed a new polio vaccine plant in ninety days. With a total of 105 million people susceptible to polio, Lilly points out that if the Salk vaccine proves its efficacy, the need for the vaccine will run into millions of immunizations.

The new Lilly plant for production of the Salk vaccine is Building 50, which was formerly the blood plasma plant. Lilly admits that they are gambling that the vaccine will do the trick. The company virtually

Marco Polo's treasures... in a bottle!

Celebrated traveler . . . friend of Kubla Khan and a score of Kings and Princes . . . Marco Polo returned to Venice with the greatest treasure of the age, a cargo of rare spices and precious perfumes worth its weight in Golden Ducats.

Little did he dream the day would come when his treasured spices and perfumes would be available in bottles, sold under the Label, Seal and Guarantee of MM&R at a tiny fraction of their former cost.

MM&R brings its customers, in the form of essential oils and basic flavor and perfume materials, not only the treasures of Marco Polo but those of the entire world. You will find many of them in the current MM&R catalog. It is your Passport to Profit. Write for full information.

MAGNUS, MABEE & REYNARD, INC.

Since 1895 • One of the World's Greatest Suppliers of Essential Oils, Flavors and Basic Perfume Materials

16 Desbrosses Street, New York 13, N. Y. • 221 N. LaSalle Street, Chicago 1, Ill.

shelved its own biological research work while research men helped solve vaccine production problems. Some production employees have been working on the vaccine instead of turning out other products. The company has spent hundreds of thousands of dollars on the new facilities.

Summary of Fair Trade

The Bureau of Education on Fair Trade has summarized the fair trade situation throughout this country as of the present time.

Forty-five states have fair trade acts, the exceptions being Missouri, Texas, Vermont, and the District of Columbia. The Georgia legislature, late in 1953, passed a new fair trade law to overcome a high state court ruling invalidating the state's earlier fair trade law.

The non-signer clause is inoperative in Florida and Michigan as the result of high state court decision which, however, upheld the validity of signed fair trade contracts.

The high courts of sixteen states have upheld fair trade: California, Connecticut, Delaware, Illinois, Louisiana, Maryland, Mississippi, New Jersey, New York, North Carolina, Pennsylvania, Oregon, South Dakota, Tennessee, Washington, Wisconsin. Of these states, fair trade under the McGuire Act has been upheld by California, Delaware, New Jersey, New York.

Test cases are now pending in Arkansas, Nebraska, and Pennsylvania. In Arkansas and Nebraska lower courts have held fair trade under their state constitutions. In Pennsylvania, a constitutional case on fair trade under the McGuire Act, is pending before a lower state court.

In the following twenty-five states the fair trade laws have been the subject of neither high state court rulings nor test cases: Alabama, Arizona, Colorado, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Minnesota, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, Utah, Virginia, West Virginia, Wyoming.

Giveaways like trading stamps, cash register coupons, etc., are prohibited in conjunction with fair-traded merchandise in the fair trade laws of the following states: Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Idaho, Indiana, Kansas, Maryland, Minnesota, Montana, North Carolina, Oregon, South Dakota, Utah, Virginia, West Virginia, Wisconsin, Wyoming.

In states where giveaways are not specifically prohibited in the fair trade law, the manufacturer can initiate a carefully-prepared action in a court of equity to establish that giveaways of any kind are a subterfuge to evade the provisions of the manufacturer's fair trade contract, with the ultimate result of evading the aim and purpose of the fair trade law. This type of action has been successful in New Jersey and New York, but it has been unsuccessful in California and Pennsylvania.

Federal Trade Commissioner Albert A. Carretta, in addressing the American National Retail Jewelers Association recently, said that a retailer is frequently in a better position to obtain enforcement of fair trade prices than the manufacturer, because he can seek an injunction against price cutting on all fair-traded items carried by a discount house. A manufacturer, in suing a price-cutting retailer, is restricted to his own fair-traded items, he pointed out.

Mr. Carretta said he disagreed with the interpretation of the Sherman Antitrust Law by "Responsible officials of the Department of Justice who have informed retailers that they might not combine for the purpose of seeking injunctions against further violation of fair trade agreements."

He said he felt that two or more individuals could combine when they merely seek enforcement of a legal contract. Very often, he said, small retailers are not financially able to undertake the expense of bringing such suits. If they are not allowed to share the legal expenses, it may mean that they will be ruined, he said. "If two or more retailers may combine in a suit to enforce one or more fair trade contracts, as indicated by a Rutherford, N. C., court during the latter part of 1953," he said, "it seems logical to conclude that a manufacturer may combine with one or more of his retailers and/or wholesalers for the same purpose. With retailers filing the suits and with manufacturers defraying the costs, a system of fair trade enforcement of maximum efficiency and maximum economy would seem to have been discovered."

Commissioner Carretta urged that trade leaders ask the Department of Justice to cooperate in a friendly suit so that the courts may determine whether the Department of Justice is correct in its interpretation of the law.

F.D.A. and Confidential Matter

A statement of Food and Drug Administration policy on confidential information contained in new drug applications was published in the Federal Register for August 18 under the heading "Statements of General Policy or Interpretation—Confidentality of Information Contained in the New-Drug Applications," under Title 21, Food and Drugs, Chapter 1.

The reason for this statement of policy results from much discussion of the filing of certain confidential information with new-drug applications. The controversy arose mainly with reference to the filing of complete information concerning flavors. Manufacturers of flavors guard their formulae very carefully, and they have objected to giving to the manufacturer who uses such flavors complete information concerning the ingredients included in a particular flavor.

The statement appearing in the Federal Register follows:

"Sec. 3.37 *Confidentiality of information contained in new-drug applications.* (a) The Federal Food, Drug, and Cosmetic Act provides, in section 505 (b) that any person may file with the Secretary of Health, Education, and Welfare an application with respect to any new drug, which shall include, among other things, a full list of the articles used as components and a full statement of the composition of such drug. These requirements apply to all components or ingredients of a new drug, whether or not they are therapeutically active. Fulfillment of these requirements may be met by submitting a full statement of the chemical or common or usual name and of the quantity of each component or ingredient of the drug. Such requirements may also be met through the inclusion in the new-drug application

Propylene glycol U.S.P., produced by Carbide since 1931, plays many important roles in the Drug, Cosmetic, and Perfume industries.

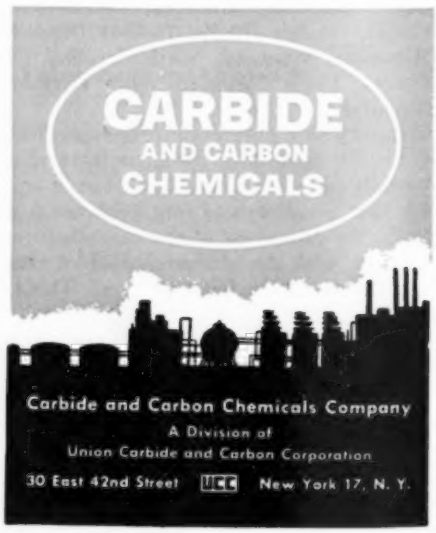
PROPYLENE GLYCOL IN:

Drugs . . . More versatile than most generally used solvents, propylene glycol dissolves many pharmaceutically active substances. Consider it as your choice when preparing tinctures, solutions, and elixirs.

Cosmetics . . . Try propylene glycol in your cosmetic creams, lotions, and shampoos. This hygroscopic, water-soluble liquid enhances the softening action upon the skin and prevents "rolling" or drying out of the creams while in use, or in storage. In lotions and shampoos, propylene glycol couples the oil, lanolin, and soap in water.

Perfumes . . . An excellent solvent for most perfumes, propylene glycol allows a rapid and complete dispersion of ingredients throughout the preparation.

Whatever your use, propylene glycol from Carbide and Carbon will give top performance at your command. For further information write for your copy of the "Emulsions Booklet," (F-4186). Offices in principal cities. In Canada: Carbide Chemicals Sales Company, Division of Union Carbide Canada Limited, Toronto.



of a properly authorized reference to a previous application or other Food and Drug Administration file containing the relevant information.

"(b) The Food and Drug Administration treats information in new-drug applications as confidential. Section 301 (j) of the Federal Food, Drug, and Cosmetic Act makes it an offense to divulge to unauthorized persons any information acquired from a new-drug application concerning any method or process that is a trade secret. Basic manufacturers sometimes submit data to the Food and Drug Administration in the form of so-called master files for the purpose of establishing the safety of ingredients that may be used in new drugs and authorize specified applicants to refer to the data in support of their own new-drug applications. Such manufacturers may regard some of the data in such files as trade secrets and request the Food and Drug Administration to treat such information as confidential. The Food and Drug Administration will preserve the confidentiality of such data to the extent that it may properly do so. Because the applicant is legally responsible for the composition of the new drug and all its ingredients and may require information in the master file for judicial or administrative proceedings concerning the drug, the Food and Drug Administration will not withhold such information from the applicant when his need for it arises and he submits a written request for it.—Oveta Culp Hobby, Secretary."

Glycerine Award Judges

Three outstanding technical men from the food, protective coatings and cosmetic fields have been named as judges for the 1954 Glycerine Research Awards by the Awards Committee. E. G. McDonough, vice-president of Evans Research and Development Corporation, New York, has been named from the cosmetic industry. Representative of the food industry is H. R. Kraybill, director of the American Meat Institute, and the representative from the protective coatings field is J. S. Long, chemical director of Devoe & Raynolds Co.

Geriatric Volume 30 Per Cent

Prescriptions, refills, and over-the-counter sales for aged persons are now estimated to account for up to 30 per cent of the average pharmacist's drug volume, according to the July issue of Pulse of Pharmacy, Wyeth Laboratories publication. Druggists in cities, suburbs, and country towns are now filling more prescriptions for oldsters than at any time in their careers, and the proportion is still growing, says Philip H. Van Italie, editor of Pulse of Pharmacy. The study was undertaken because previous prescription surveys did not give many clues to substantiate percentage breakdowns since antibiotics, antihistaminics, cough syrups, vitamins and many other drugs are prescribed for young and old alike.

F. D. & C. Act Now Title 21

The Federal Food, Drug, and Cosmetic Act is no longer a single law of this country. It is now part of a law known as "Title 21 of the United States Code" which was enacted by the Session of Congress which has now adjourned.

Title 21 is a big 190-page measure which is aimed at clarifying and modernizing existing law in the food, drug, and related fields. Besides the 1938 Food, Drug, and Cosmetic Act, as amended, the new law includes the Import Milk Act, Filled Milk Act, Tea Act, Caustic Poison Act, etc. Also included in Title 21 is the Miller agricultural pesticides Act, signed into law just before the end of the Congressional session.

The purpose of this new law is to codify and revise the Food, Drug, and Cosmetic Act of 1938, and all other statutes in this field passed in the last 70 years. Many of these laws, which are scattered through many volumes of the statutes at large, are out-moded, ambiguous, and conflicting, as well as being repealed by implication in later statutes. In reporting the bill, the Senate Judiciary Committee said:

"By enacting this bill into positive law as Title 21 of the United States Code, that title will thereby become the law rather than merely prima facie evidence of the law, and reference to the statutes at large will be rendered wholly unecessary."

Doctors and Direct Mail

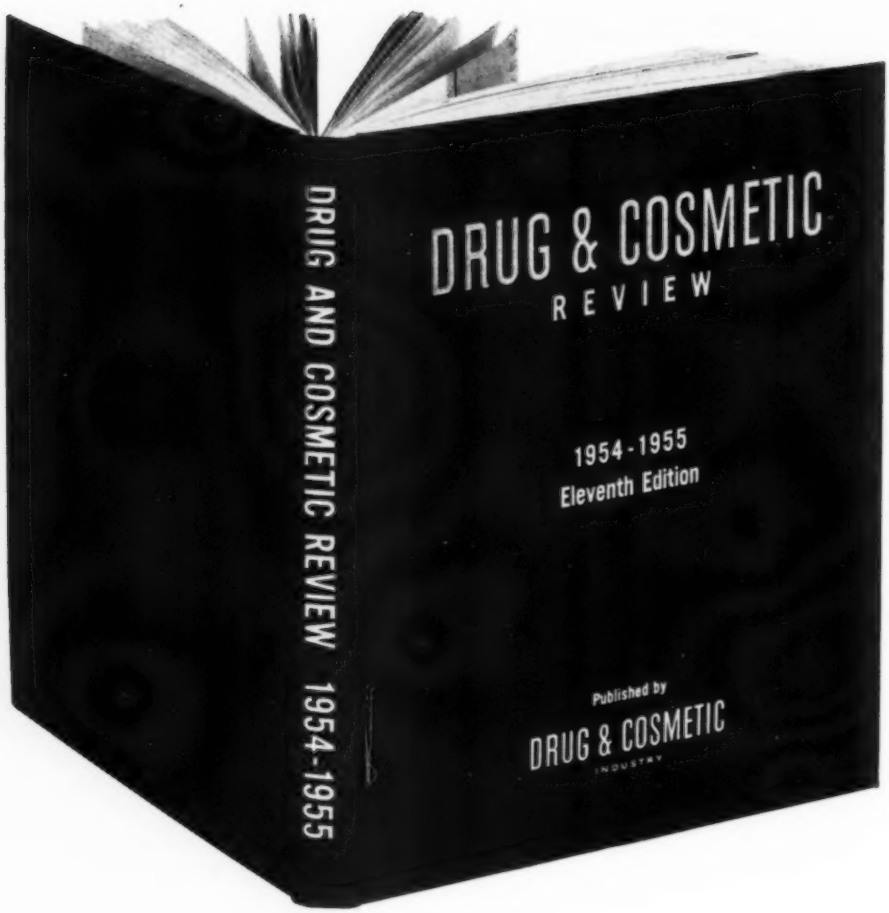
Physicians in this country received more mail in the twelve months from May 1, 1953 to April 30, 1954 than in any similar period, according to Clark-O'Neill, Inc. This information was compiled from the mail received by a busy New York general practitioner, every piece of mail which he received being saved and counted. A busy GP gets a mailing a day more than one with a smaller practice, and probably three or four a day more than the average specialist. Mailings from pharmaceutical manufacturers totaling 3,178 works out to 10 mailings on every day of the year on which mail is delivered. This same physician ten years ago received 971 mailings from the drug industry.

These mailings solicited use of 674 products, against 741 for last year. The physician had never heard of 162 of these products, while last year there were 229 new preparations offered. The new products took the place of 229 which disappeared from the mail—a poorer survival rate than in the previous study which had 112 drop from sight. These figures strongly emphasize the terrific pace of the ethical drug business.

Showing up once on the doctor's desk were 169 products, while 171 products made eight or more appearances—by far the best frequency factor yet, since in 1953 there were 125 products mailed eight or more times, and in 1952 exactly 100. The Number One drug on the direct-mail hit parade made 64 mailings, the runners-up showing frequencies of 57 and 55.

Cardiovascular products have lost their 3-year lead as the most heavily promoted classification. They were displaced by the combined group of "Antibiotics (except penicillin), Penicillin, and Penicillin plus Sulfas." Vitamins remain in third place. Antihistaminics surged as high as fourth for the first time.

The product classification of Fungicides was dropped because so few mailings were made. A new classification was started, Anticholingerics, with 1.3 per cent of all the drug mail.



NOW AVAILABLE

New Eleventh Edition --- 1954-55

Complete Reference Book for Drug and Cosmetic Manufacturers

- **Complete and only specialized directory of all cosmetic suppliers**
- **Trade Name Directory of drug and cosmetic suppliers**
- **Complete condensed catalogs of leading supply companies**
- **Statistics**
- **Associations**
- **Periodicals of the industry**

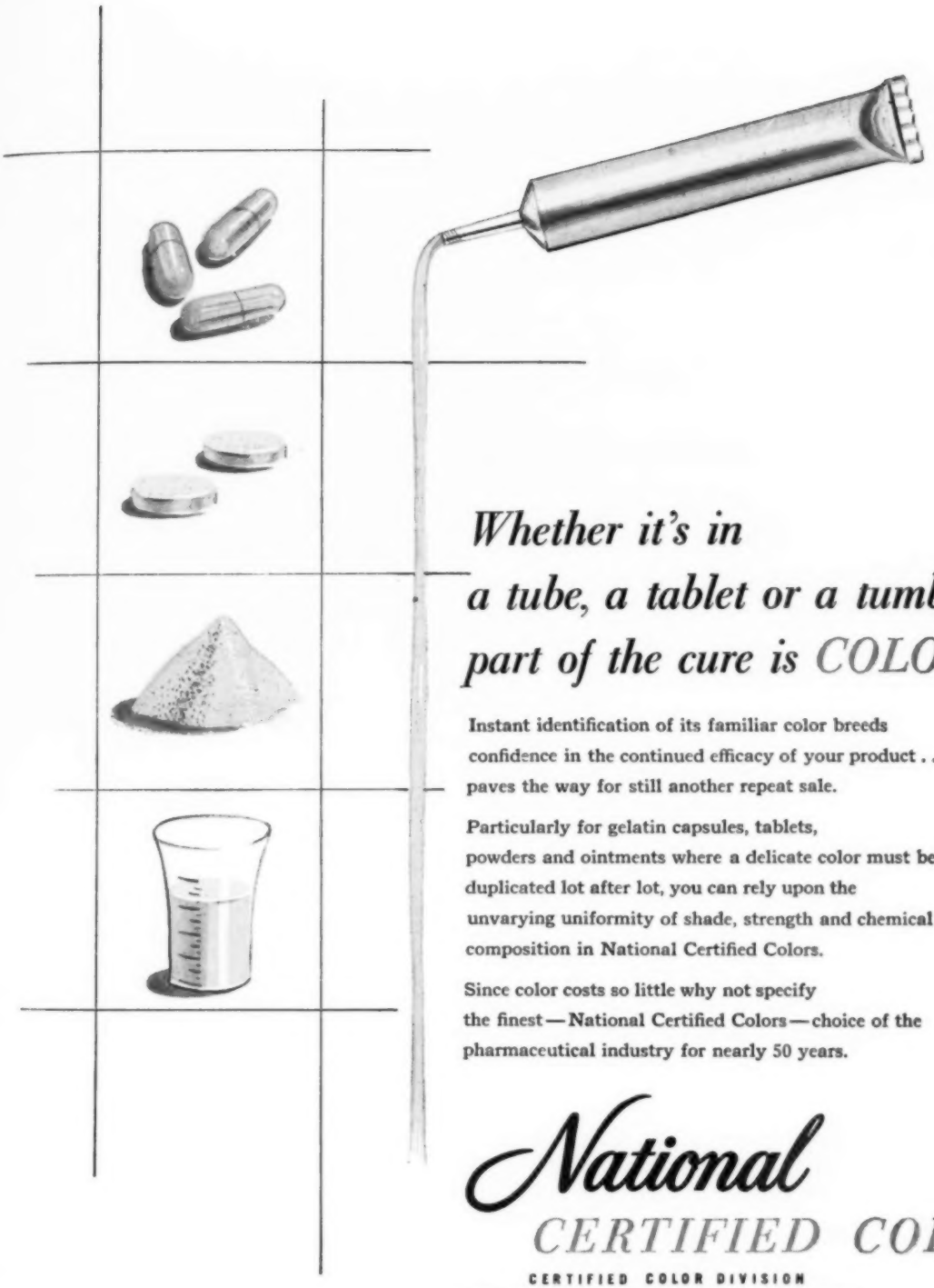
Buyers, Chemists, Perfumers, Plant Managers, Executives of Drug and Cosmetic Manufacturing Companies will find what they want in DRUG & COSMETIC REVIEW.

Cloth Bound — over 300 pages

$4.00 in U.S.A. postpaid **$5.00 Foreign postpaid**

DRUG & COSMETIC REVIEW

101 West 31st St., New York 1, N. Y.



Whether it's in
a tube, a tablet or a tumbler,
part of the cure is COLOR

Instant identification of its familiar color breeds confidence in the continued efficacy of your product . . . paves the way for still another repeat sale.

Particularly for gelatin capsules, tablets, powders and ointments where a delicate color must be duplicated lot after lot, you can rely upon the unvarying uniformity of shade, strength and chemical composition in National Certified Colors.

Since color costs so little why not specify the finest—National Certified Colors—choice of the pharmaceutical industry for nearly 50 years.

National
CERTIFIED COLORS

CERTIFIED COLOR DIVISION
NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

Allied Chemical

THERE'S *Design*

IN FRAGRANCE TOO!

A successful perfume is designed to be a fine work of art, to be technically right, to appeal to the tastes of its specific market, and finally, to suit its class price-wise.

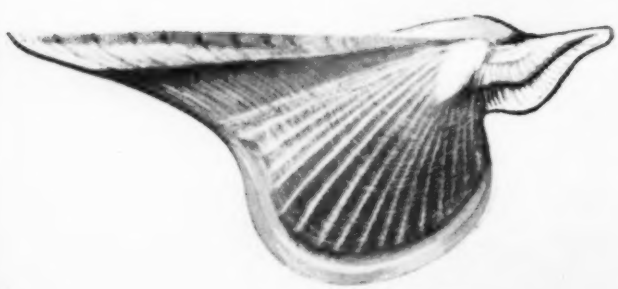
The van Ameringen-Haebler organization is unmatched in ability and experience in producing the finest in perfume materials.

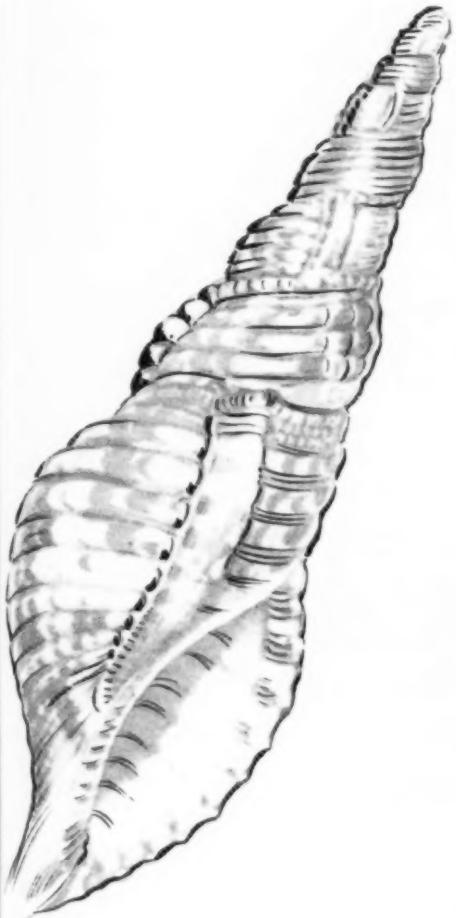
We would like to help you with your next perfume problem.

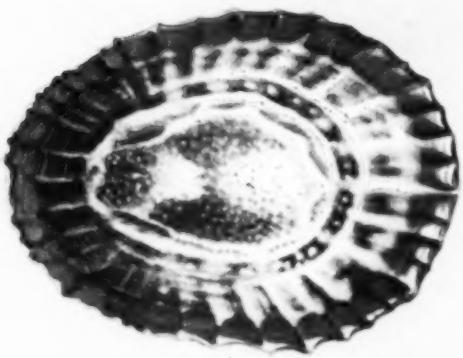
MANUFACTURERS AND CREATORS OF THE FINEST PERFUME MATERIALS

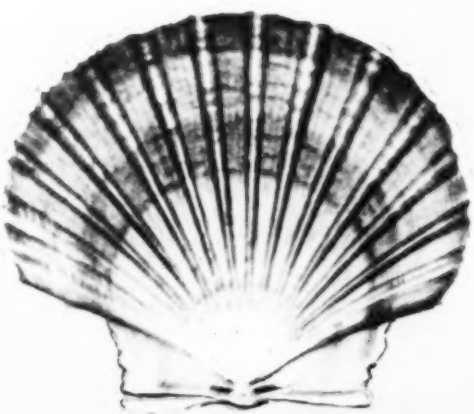
van Ameringen · Haebler, Inc.

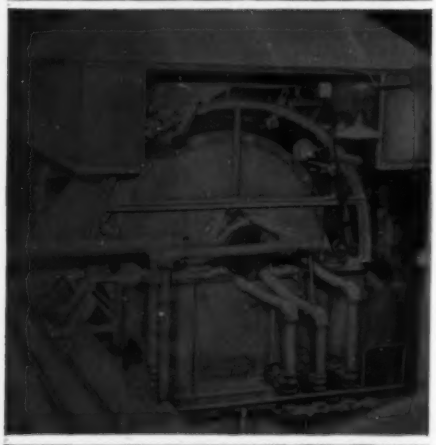
521 WEST 57th STREET NEW YORK 19, N. Y.

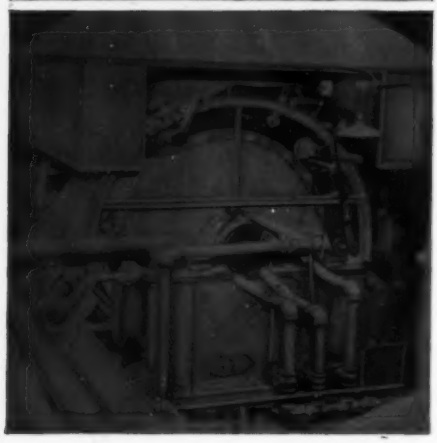












when using fine chemicals

... to be sure ✓ *check the source*

Continuous Performance...

... is a requirement in pharmaceutical production. And to get an uninterrupted flow of product — equipment, skill, starting materials and intermediates must be right! The physical form of a starting material or intermediate, more often than not, is a critical factor. As a major supplier of chemicals to the pharmaceutical industry, Mallinckrodt has mastered techniques of manufacturing physical forms of chemicals best suited to your manufacturing problem— whether it involves injectables, oral preparations, tablets or capsules. Refinements are continually being made to help the pharmaceutical manufacturer do his job easier and better. Write us if you have questions or a problem.

SERVING THE PHARMACEUTICAL MANUFACTURER

Mallinckrodt® Since 1867

MALLINCKRODT CHEMICAL WORKS MALLINCKRODT STREET, ST. LOUIS 7, MO.
72 GOLD ST., NEW YORK 8, N. Y. CHICAGO · CINCINNATI · CLEVELAND
LOS ANGELES · PHILADELPHIA · SAN FRANCISCO · MONTREAL · TORONTO

The SUNTAN Industry *by L. Stambovsky*

part one *product evaluation*

The Suntan Industry is beginning to show signs of adolescence. Born without any demonstrable therapeutic competence, sunburn preventives, or suntan lotions, experienced a languid and delayed growth. The semi-fraudulent character of the early products endowed the entire industry with a reputation of deception and burned skins. In fact, even to this day, the writer has, on many occasions behind the retail drug counter, been told point blank that all sunburn preventives were worthless. The attitude of the medical profession was one of either indifference or contempt. However, respect is now being commanded in all circles by appearance of really effective and ethical products. The evolution of the suntan lotion was retarded by virtue of the vacuum which existed relative to the scientific and practical fundamentals involved in the prevention of solar burns.

Present Market

Drug Topics estimates the volume for suntan lotions, at retail, at $6.69 million in 1953. In 1952, sales were $5.9 million and in 1951, $4.75 million. With an average retail price of about 65c, it would mean that less than 11 million units were sold in 1953. With a population of nearly 170 million and with whatever export business is being done, 11 million units seems unreasonably low. This is especially so, now that winter sunbathing at southern resorts has become commonplace. In any event, even if the total business is only $6.69 million, it is of sufficient magnitude to lure many cosmetic, drug and chemical manufacturers. From the humble "bathtubber" to the chemical Colossus—all have been tempted or did attempt to get into the act. The nature of this irresistible fascination is hard to explain. Possibly it is based on long range potential for future expansion. We shall later bring into view an abundance of facts concerning changing recreational and health habits that insure a steady growth of suntan markets.

Failure Financially Costly and Detrimental to Prestige

With amazing regularity, failures occur in the suntan field but invariably replacements quickly follow with new products. This discussion is not intended to discourage participants or new entrants in the suntan business. On the contrary, it is hoped that by bringing into view the errors and fallacies responsible for so many unsuccessful ventures, others might be spared the trouble and expense of a similar fate. The sunburn preventive is roughly twenty years old which in this fast moving age, is a considerable span. Notwithstanding this passage of time, the industry or science underlying suntan products is highly characterized by misinformation, academic and impractical concepts and vacuum. Incompetent formulation is directly and specifically attributable to an insufficient or incorrect understanding of the basic principles upon which the prevention of solar-dermatitis is dependent. It is unfortunate that many persons without qualification claimed to be experts in this field and served either as consultants or employees or authors. From such sources many firms obtained their information upon which their products were designed, sometimes with disastrous results. For the sake of emphasis, we should like to mention briefly a few such blunders which terminated in abandonment with heavy financial losses. About 1940 one of our greatest chemical dynasties launched a new sunscreen—not a finished product but just the screen. The very name of this company endowed the compound with magic. Its feeble absorption in the

COURTESY GERMAINE MONTEIL

erythemogenic zone of the solar spectrum was soon discovered and it was hastily withdrawn. At a slightly later date another huge organization announced a new miracle sunscreen which they claimed required but one-fourth of one per cent concentration to prevent sunburn. This, too, proved to be a delusion. Later the recommended concentration was increased to five per cent, just 20 times the original recommendation. Finally the screen was allowed to expire quietly. For at least 15 years a well known and highly respected pharmaceutical house had been strenuously, and expensively, promoting a sunburn preventive cream and lotion containing hydroquinone as the screen. The writer had tested this compound as far back as 1933 and found it completely inadequate; its absorption of actinic ultra-violet is feeble; it is chemically unstable in the presence of ultra-violet light; it is regarded with considerable suspicion as a toxic compound. Yet notwithstanding these multiple defects, this firm continued to spend thousands of dollars on a product doomed before it was launched. The season of 1954 did not witness further exploitation and the product is assumed to be a casualty. An outstanding case of failure is a fine chemical house with an enviable reputation which had been marketing esters of anthranilic acid or ortho-aminobenzoic acid as sunscreens since about 1935. A few erythemal tests would have revealed just how feeble are their performance in the erythemogenic range. This the writer had determined even before the above date. After many years of intensive and expensive efforts to obtain a foothold in the suntan industry, this organization has at last quietly retired these compounds and is announcing a new sunscreen.

Perhaps the most pathetic and ill-advised of these abortive ventures was that of a European company which entered the American market with a 2.2 per cent tannic acid jelly. Tannic acid is one of the poorest of all sunscreens. It is notoriously unstable and loses what little filtration it possesses in a matter of minutes. As marketed in a 2.2 per cent concentration, its protective properties were, to all intents and purposes, nil. Furthermore these facts are today well known. Nevertheless in the summers of 1952 and 1953, this firm, it is said, and which seems plausible from the extent of their advertising, spent in the neighborhood of $50,000 per season. Disappearance from the scene in 1954 tells of an ominous fate.

Reasons for Error

These post-mortems have been presented forcibly to drive home the glaring fact that costly and amazingly extended errors have been made. The logical question at this point is *how* and *why*. Surely anyone of the above-mentioned houses is more than capable scientifically. In the main, the answer to this mystery resides in the lack of field experience or opportunity, and the failure to integrate theoretical considerations with practical requisites. There are two phases in the development of a sunburn preventive; the first is evaluation; the second is formulation. The decisive error committed in the cited cases was in evaluation. In each instance, spectrographic analysis served as an unquestionable guide-post of efficiency. Nothing could be more misleading. Beautiful spectrograms of certain compounds will show complete extinction between 2950 and 3150 Angstroms yet the protection afforded from solar burns is practically negligible. The spectrograph discloses only qualitative information. It is absolutely unreliable quantitatively, as experience has so frequently proven. There are several reasons why the spectrogram should not be trusted as a barometer of sunscreen efficiency: the exciting arc or source of ultra-violet energy of the spectrograph is extremely feeble, consuming not more than a few watts, and is utterly incomparable with the erythemogenic intensity found in sunlight. Therefore since the impinging rays are so weak, even the most minute and inconsequential capacity to absorb actinic radiation would show up in the spectrogram as being very strong—even to the point of complete extinction. A compound of such description, in identical concentration and cross-section, when subjected to the enormously more powerful erythemogenic energy of sunlight, will betray a vastly inferior potency than found on the spectrogram. The mercury arc which is employed in nearly all spectrographs emits only a few lines in the erythemogenic wave-lengths; 2970, 3020 and 3130 Angstroms. This is a highly discontinuous spectrum whereas the ultra-violet content of solar radiation is continuous, i.e., it is represented by every wave-length from 2950 to 3150 which comprises the peak of erythemogenic activity. There are very strong grounds to suspect that sunscreens do not react equivalently under the influence of continuous and line spectra. It seems that screening or absorbing compounds are more easily penetrated by a continuous spectrum as in sunlight, than by the discontinuous spectrum of the mercury arc. Possibly in comparing various screens under precisely parallel conditions, the spectroscope might be of some value in furnishing relative data. Even this function should not be trusted too far. As already stated, the excitant is so weak that in the examination of two compounds, one might achieve complete extinction in the desired range and the other might be substantially inferior and yet both be of slight value in the prevention of sunburn.

The second major error responsible for incompetent products is in formulation. Many entrants in the sunscreen and suntan fields possessed no conception whatsoever as to how efficient a sunburn preventive should be. Without long, intensive study of public habits relative to sunbathing, the dearth of applicable information is understandable. To proceed without such knowledge is a disservice to the entire industry and a financial injury to the manufacturer.

Methods of Testing

Several methods have been advanced for the evaluation of sunscreens: chemical, photo-electrical,

COURTESY GERMAINE MONTEIL

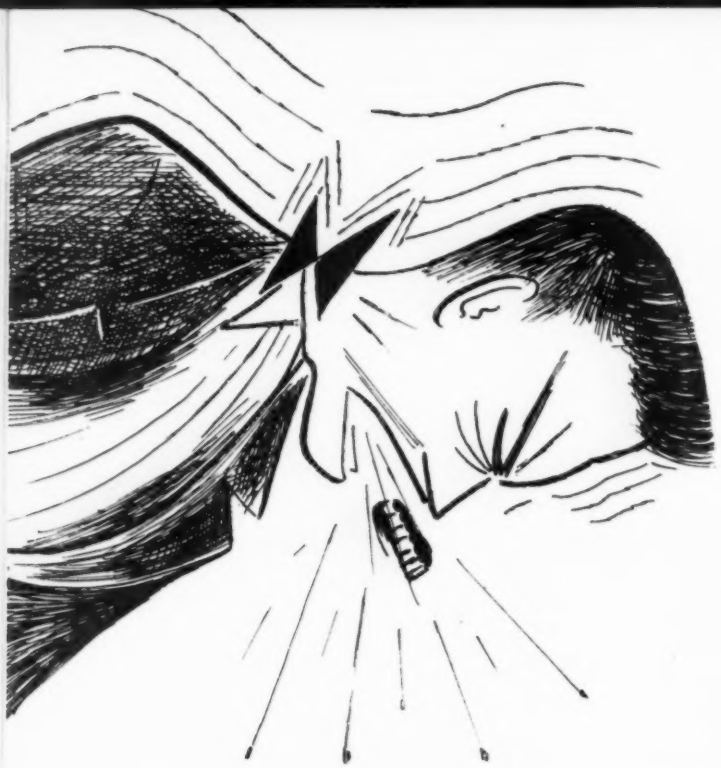
spectroscopic and biologic. Chemical analysis is highly complex and impractical; photo-electric systems are of extreme delicacy and frequently permit the intrusion of gross errors; the spectroscope has already been disqualified, except for strictly qualitative data; the biologic does offer a reasonable approximation of sunscreening values. This is so because first, the skin itself is used as an indicator, and second, partially simulated sunlight is employed as an excitor. In the final analysis, our ultimate objective is to determine how efficiently the product in question will protect the skin. With the biologic technique we have a direct reading, leaving less room for error than any other known procedure. An "Erythemal Reaction" plan was devised by the writer in 1933,[1] and has been refined several times since then. A Hanovia quartz mercury arc (Analytical Model), 500 watts input is used as a source of ultraviolet energy. This generator admittedly does not duplicate sunshine. Sunlight contains no wave-lengths shorter than 2950 Angstroms whereas the quartz mercury arc radiates large quantities of energy below this wave-length. Obviously, radiation below 2950 Angstroms is undesirable and is therefore eliminated by the interpolation of a sheet of Corex "D" glass between the burner and the target. The doors of the lamp are flanged and are intended to hold such filters in place. Corex "D" is practically impervious to energy at 2800 A.; transmits 50 per cent at 2950 A; 72 per cent at 3000 A.

The output of the hot mercury arc is quite variable being dependent upon line voltage, age of burner and cleanliness of burner surfaces. Skin reaction to erythemogenic ultra-violet radiation is also inconstant depending upon type of skin, previous exposures, racial origin, etc. Obviously with so many potential variations in the burner and target, a control must be run simultaneously with each analysis. Luckeish[2] divided into four, not too sharply defined stages, average response to actinic radiation which are as follows:

1. Minimum Perceptible Erythema, (MPE), is that degree of red or pink barely but definitely discernible.
2. Vivid Erythema, (VE), as implied is a bright red or vermillion, easily identified and without the presence of pain.
3. Painful Burn, (PB), an epidermal reaction characterized by vivid erythema and considerable pain.
4. Blistering Burn, (BB), this final stage of ultraviolet irritation is distinguished by a high pain level, blistering desquamation.

Luckeish has ascertained the exposures to sunlight

(*Continued on page 408*)



by Milton A. Lesser

Keeping Pace with

It is a little over a decade ago that the antihistamines were introduced to medicine. In that time they have proved to be a most interesting and versatile group of compounds. Because of their histamine-antagonizing action they have found an established place in the treatment of various allergic disorders. However, because of other effects, the antihistamines are being used with considerable success in the treatment of conditions that are not generally thought of as allergic in nature. Because of their unusual characteristics, the antihistamines are constantly being tried in the treatment of different disorders.

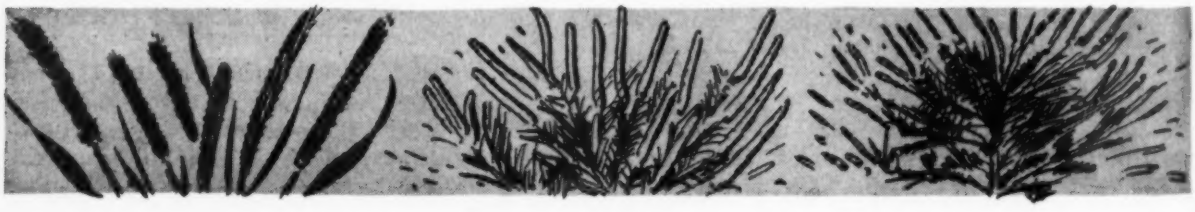
During recent years, numerous antihistaminic compounds have been developed and many of them have been placed on the market. In addition, as remarked by Feinberg,[1] literally thousands of articles have been published concerning these drugs and their use in many diseases, ranging from ringworm of the feet to conjunctivitis and from muscle cramps to burns. Sheldon[2] estimates that such reports have described the use of the antihistamines in the treatment of about 125 different conditions or symptoms. Of course, not all of these conditions have benefited from antihistamine therapy, but results have been good in many disorders both allergic and nonallergic. It is quite possible that, in time, some of the newer, current uses will be validated, and others refuted. Meanwhile, the therapeutic range of the antihistamines is expanding rapidly.[3]

It is not the purpose of the present discussion to review the vast literature on the antihistamines. Comprehensive considerations of the chemistry of these compounds were published in 1950 by Idson,[4] and by Leonard and Huttrer[5]. In the same year, Feinberg and his colleagues[6] provided a well documented review of the history, chemistry, pharmacology and clinical applications of the antihistamines. In addition an indicative review[7] of the expanding roles of the antihistamines appeared in the November, 1950, issue of DRUG AND COSMETIC INDUSTRY. For these reasons, the present review will attempt to cover developments of only the last four years.

The continued importance of the antihistamines is reflected in the fact that new compounds are constantly being clinically tested and added to the already long list of such products.[8,9] However, as remarked by Siegel,[10] few of the recently introduced antihistamines are superior to the older, more thoroughly investigated compounds. Also indicative is the understanding that another antihistamine, pyrilamine maleate, is to be included in the forthcoming USP XV.

The popularity of the antihistamines and their wide range of usefulness is well indicated in the many dosage forms and combinations in which they are now available. Oral forms are the most widely used and these drugs are available in tablets, both coated and uncoated, and capsules. They are also provided in repeat or sustained action coated tablets and, more recently, in the form of prolonged action capsules. Elixirs and syrups that permit dosage adjustments are available for children.

Ampoules of antihistamines are on the market for use where a rapid effect is desired, as in allergic emergencies. Suppositories for rectal administration are used for local conditions or where oral administration is difficult. Topical administration, for the treatment of dermatologic and other conditions, is made possible with antihistaminic ointments and creams. Ophthalmic solutions and ointments provide antihistaminic effects in allergic ocular conditions. Nasal drops and sprays, the latter often dispensed in plastic squeeze bottles, are popular. Antihistamine-containing syrups and expectorants are used to combat coughs.[11,12]



the ANTIHISTAMINES PART ONE

The relative popularity of these various dosage forms for the treatment of allergic disorders is indicated in a recent prescription survey[13] made by one of the larger pharmaceutical organizations. Based on a study of new prescriptions only, it was found that five dosage forms account for 94.5 per cent of the total market, as follows:

Tablets	67.0 per cent
Elixirs and syrups	18.7 " "
Lotions	3.1 " "
Creams	3.9 " "
Ointments	1.8 " "

Mixtures of antihistamines with each other and with other drugs have found wide use in modern therapy. As noted by Feinberg,[1] combination of an antihistamine with another drug or another antihistamine is usually made either for the purpose of counteracting the side effects or for potentiating its action. Thus, it has been reported[14,15] that a combination of two antihistaminic drugs, using one-half the average dose of each, has given good therapeutic results with a minimum of undesirable side effects. It has also been found that a mixture of a short-acting drug with a longer-acting drug has definite advantages, because some of the long-acting agents do not start to work until an hour or two after ingestion.[1]

Various examples can be cited to show how antihistamines are combined with other drugs. Thus, ephedrine and aminophylline may be added to produce a preparation for the relief of asthma. Ammonium chloride, sodium citrate, codeine, papaverine and other drugs are combined with an antihistamine; the resulting compounds serving as expectorant cough mixtures. Ephedrine is combined with antihistamines in nose drops. A number of manufacturers produce mixtures containing an antihistamine plus aspirin, phenacitin and caffeine, with perhaps some codeine.[16] Such preparations, which are actually combinations of an antihistamine with variations of the old A.P.C. formula, were quite popular for a while for the prevention and treatment of the common cold.

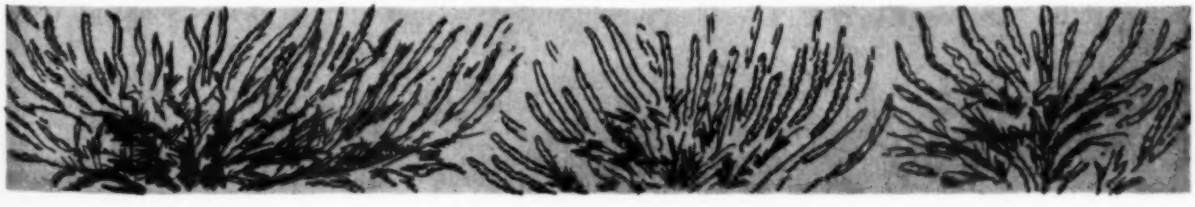
Studies have shown that, in contrast to the diversity of their chemical structures, the pharmacological and clinical properties of the antihistamines are surprisingly similar and differences are usually quantitative rather than qualitative.[12] This is brought out in Sheldon's[2] statement that the antihistamines have many pharmacological activities and for this reason they have been suggested for use in a great number of conditions and situations. Their antihistamine effect is one of the prime reasons for the use of these drugs in cases of anaphylactic reactions or severe allergic shock. This effect also explains why they are so valuable in such conditions as urticaria, angioneurotic edema and hay fever. They will protect an animal against histamine shock.

Sheldon also points out that all the antihistamines are sedative in action and some of the benefits obtained with these drugs are entirely related to this action. All these drugs have atropine-like activity; some more than others. They all have some local anesthetic activity. They are also anti-emetic, and here again certain of the antihistamines are more effective than others. Evidently they all have an effect on the enzyme system as well as an antihyaluronidase effect, which is particularly useful in dealing with such conditions as contact dermatitis and atopic eczema.

Apparently, says Warin,[17] the specific histamine antagonism is the same with all the drugs, but the nature and degree of side-effects vary. It is the incidence of these side-effects, when equi-effective doses of the drugs are compared, that usually determines which is the most suitable drug.

As indicated by Wyngaarden and Seevers,[18] the commoner side reactions of the antihistamines are drowsiness, sleepiness, dizziness, headache, insomnia, nervousness, nausea, vomiting, constipation, diarrhea, and dryness of the mouth. Different agents may produce these side effects in varying degree; the incidence of such reactions ranging from 10 to 63 per cent or more in patients using various preparations. However, most of the side effects are relatively innocuous and are important merely because they are annoying to patients. Severe toxicity from the antihistamines is rare, but serious reactions have resulted from idiosyncrasy or overdosage.

Considering the vast amount of these drugs used throughout the world, says Warin,[17] the few instances



of severe reactions have little significance. It seems that in general the antihistamines are relatively free from serious toxic effects in therapeutic doses, even when administered for prolonged periods. However there is some evidence that continued use of antihistamines results in a development of tolerance or refractoriness to these drugs. When the development of tolerance is suspected, Dannenberg and Feinberg[19] advise that the dose should be increased or the drug discontinued for a short period before resuming therapy.

As already suggested, the antihistamines are rather unusual in that certain side effects have proved to be of therapeutic value in treating disorders not considered to be of allergic origin, such as Parkinsonism, motion sickness and others. There is growing recognition of the fact that the pharmacologic action of these agents is not limited to the prevention of antihistamine reactions, but that many other pharmacologic properties of these drugs are important. These various actions, which are now being studied more intensively, have made the antihistamines a very versatile group of drugs with a growing list of clinical indications.[3,20]

Moreover, the number and diversity of the available antihistamines, as well as the variety of dosage forms, make it possible for the physician to pick a preparation most suited to a particular case. Obviously, says Fishbein,[21] the choice of a preparation in a particular instance will depend on its symptomatology of the patient, the character of his reactions, his personality, and his previous experiences with antihistamines. Also indicative is Siegel's[10] advice that when one antihistamine fails to produce a good response, another with a different chemical structure should be tried. Sheldon[2] makes a similar suggestion and urges that adequate doses be given.

Of course the main, established indications for the antihistamines are in the therapy of allergic disorders. As pointed out by Swineford,[22] these drugs are particularly effective in relatively mild atopic reactions of the nose and skin. They usually relieve or prevent mild perennial and seasonal hay fever, acute or chronic urticaria and angioneurotic edema and reactions to allergen injections. While such action is not predictable, they may relieve mild atopic dermatitis, contact dermatitis, serum reactions, gastrointestinal allergy, and atopic reactions to foods or drugs. Antihistaminics are only occasionally beneficial in asthma, but they benefit the condition in children more frequently than in adults.

It is recognized that the effects of the antihistamines is usually palliative rather than curative. However, they do provide good symptomatic treatment in many conditions. Their use often makes the patient comfortable and, in some instances, they prevent secondary complications and shorten the course of the illness.[23,24] Such symptomatic relief is especially beneficial when it can be given without interference with the therapeutic action of the indicated specific drug.[3]

In the case of allergic disorders, desensitization is considered to be the ideal method for permanent control. As pointed out by Fishbein,[21] most allergists are convinced that the proper treatment of hay fever is to determine the offending allergen and then to desensitize the patient, meanwhile using antihistamines for relief. Unfortunately, the value of the desensitizing procedure in some of the more highly sensitive patients has been limited because of frequent reactions to increasing amount of antigen. This has forced the discontinuance of curtailment of injections before the optimum dosage was reached.[25]

It has been found that in many cases these reactions could be minimized or obviated through the conjunct use of antihistamines. Giving a preliminary oral dose of antihistamine before injection has served to prevent constitutional reactions and has permitted the use of higher allergen dosages.[26] More recently, however, considerable interest has been focused on the use of parenteral antihistamines; a suitable agent being combined with the antigen in the syringe before injection.

Spearman,[27] for example, used such a procedure in a group of 488 patients with various allergies. He considered the results to be extremely beneficial in that both focal and systemic reactions were lessened, the doses of antigens could be greatly increased, and the patients were usually given immediate temporary improvement of their symptoms.

Similarly, Parish[28] reported that an antihistamine in combination with antigens permits a two- to four-fold increase in the amount of antigen tolerated by highly sensitive individuals. The use of the antihistamine, he found, minimizes the risk of local or systemic reactions to antigens in patients undergoing desensitization therapy. In their preliminary study on highly sensitive patients, Sanger and his colleagues[29] observed that the combined allergen-antihistamine injection reduced the incidence of systemic reaction from 46 to two per cent. Other allergists[26,30,31] have also written on the advantages of this procedure.

Essentially the same principle has been employed to prevent undesired reactions from transfusions and from the parenteral administration of various drugs, notably penicillin, and other substances, such as x-ray contrast media. With the growing use of blood transfusions, there has been increased interest in methods for availing untoward reactions. One approach to this problem has been through the addition of an appropriate antihistamine to the blood prior to transfusion.

Following their use of such a technic, Ferris, Alpert and Coakley[32] expressed the belief that it should be possible to minimize if not eliminate the untoward symptoms of allergic and pyrogenic transfusion reactions by the prophylactic use of an antihistamine. Also indicative is a study made by Offenkrantz and his colleagues[33] in which there was a reaction rate of only 0.6 per cent when, in 300 transfusions, an antihistamine was introduced directly into the blood prior to infusion. In contrast, in a control series of 350 cases, 5.3 per cent of the transfusions elicited either pyrogenic, allergic, or both types of reactions. As a result of such findings, this

(Continued on page 401)

PERFUMED AEROSOLS

by Harry Hilfer

COURTESY HELENA RUBINSTEIN

Propellants may be easily adapted to be used in conjunction with colognes, toilet waters and perfumes. Indeed in their use in conjunction with cologne and toilet water preparations they enable the user to apply the essential oil solution much more easily and readily than is possible from the standard type of bottle and from this standpoint, other factors being equal, should enjoy a good reception. These other factors however may have a bearing on their consumption.

In the usual method of preparation of colognes and toilet waters, the oils are aged with the alcohol and small amounts of water for varying periods to improve the bouquet. As a general thing the usual 95 per cent S.D.A. alcohol is used as the solvent and the solution, after having aged for the required period, is then further diluted, chilled and filtered before packaging.

This aging process, which is considered important, could be repeated in much the same manner as it is now except that absolute alcohol would have to be substituted for the usual 95 per cent alcohol. The S.D.A. 100 per cent alcohol is available for such purposes. The reason for the use of the dehydrated alcohol is to prevent possible hydrolysis of the propellants with subsequent production of HCl because of the presence of even small amounts of water, whose generation would cause possible corrosion of the containers.

There are several theories of the chemistry involved in the aging process and, without going into them exhaustively, we might say that there is one school of thought which believes that the presence of small amounts of water is necessary as an adjunct to proper blending and smoothening of the harsh notes. If this is so, the aging process in absolute alcohol may not be suitable as compared with 95 per cent alcohol. I believe however, that perhaps only some essential oils are benefitted by the presence of water and others are not. A system of aging in absolute alcohol may therefore require a reformulation to take this into consideration.

Special care must also be taken to assure complete absence of any possible precipitation, since solid particles may so easily clog the valves of the container rendering it unfit for use. The halogenated hydrocarbons are, generally speaking, good solvents, but there are some essential oils which are not completely dissolved in such a medium, even if they are solubilized in alcohol. This does not mean that they cannot be used—a proper concentration of alcohol could serve to keep them in solution. The propellant-alcohol ratio therefore becomes important as a means of prevention of precipitation. It would appear that from the standpoint of formulation, it would therefore be best to use minimum amounts of propellants and relatively large amounts of alcohol.

Aside from the standpoint of the solubility of the oils, the ratio must contain sufficient propellant to fulfill the spraying requirement. This is essentially controlled by the pressure of the vapor phase inside the container. In the case of some of the propellants a low temperature factor must be considered as well since their boiling points may be higher than some atmospheric temperatures encountered under conditions of use. Ordinarily, mixtures of propellants are used in which are incorporated both a high boiling and low boiling propellant. For example, trichloromonofluoromethane has a boiling point of 237.7° C. while dichlorodifluoromethane has a boiling point of minus 29.8° C. Such a mixture should be capable of working under all atmospheric conditi ons,

(*Continued on page 420*)

Direct Results from DIRECT ADVERTISING*

by Charles S. Downs

VICE-PRESIDENT IN CHARGE OF PUBLIC RELATIONS AND ADVERTISING, ABBOTT LABORATORIES

ABBOTT LABORATORIES

HOFFMANN-LA ROCHE, INC.

ABBOTT LABORATORIES

Methods employed to promote the sale of Abbott products include the employment of several hundred salesmen or detail men. Their principal function is to persuade physicians to prescribe and use Abbott products, and to see that adequate stocks of our products are available in pharmacies and hospitals.

The other major sales promotional tool employed by Abbott is advertising. This includes nearly every common kind of promotional effort except consumer advertising. Of this, we do none. The size of our advertising program requires an annual multi-million dollar expenditure. Of this, roughly half goes into direct mail, if one does not include the cost of samples distributed by mail to physicians on request and otherwise. If this cost is included, direct mail accounts for somewhat more than half of our total advertising expenditure. Our second largest advertising expenditure goes into medical and drug trade publications, and the sum involved was large enough in 1953 to rank Abbott the sixteenth largest business paper advertiser in the United States according to the latest Associated Business Papers' report.

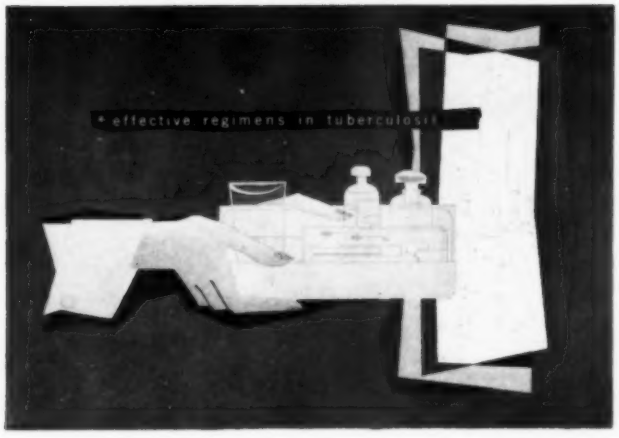
Advertising designed to be left by salesmen on their calls, medical and drug convention exhibits, dealer helps designed to help retail pharmacists promote their prescription department sales, window displays aimed at presenting the pharmacist to his public as a professional man, product promotional films—all are used by Abbott. Expenditures for them, however, are relatively far lower than for our two principal media, direct mail and business or professional publication advertising. Our high product birth and death rates dictate that much of both our field selling and advertising effort be devoted to what can be called technical educational promotion.

With our direct mail, as with our other advertising, our primary audience is composed of the approximately 185,000 physicians in this country. Eighty per cent or more of our effort—the percentage varies according to circumstances—is directed to physicians. The remainder is devoted to advertising to pharmacists, hospitals, veterinarians, dentists and, a very little, to nurses. This year, Abbott will send more than two hundred major mailings to physicians. Some of these mailings will cover the entire American medical profession; others will be addressed only to certain groups of physicians, examples being general practitioners. surgeons, children's specialists and so on.

It may be of interest to know how our elaborate and colorful house organ, What's New, came into being back in the mid-1930's. This was the result of an earlier experience with a pocket-size magazine printed in black and white, and without illustration. The actual editorial content was of the same type and quality used in What's New today. Production costs for the pint-size magazine were low but, in terms of written response from physicians, it proved to be the most expensive advertising venture in our experience. In fact, a succession of issues produced almost no response at all. Then we went whole-hog the other way in physical format with

*Abstracted from address delivered by Mr. Downs before the Advertising Association of the West.

E. R. SQUIBB & SONS, INC.



E. R. SQUIBB & SONS, INC.

the result that written response from doctors has caused us to keep the publication in something approaching the *Fortune* class ever since.¶

Returns from What's New, as well as those from straight product mailings, may surprise some of you. With any of our direct mail, requests for more information or for samples of a product advertised rarely run below 10 per cent of the number of pieces mailed. From 10 per cent, response ranges upward to 15, 18, 20, 40, 50 and even to 60 per cent or more. Records of such response cover a period of many years and are constantly studied with a view to improving our batting average.

But, it may be objected, sales, not inquiries, are the only true measurement of the effectiveness of any advertising. How can Abbott, employing as it does a large number of salesmen and an extensive program of business and professional publication advertising, measure the effects of its direct mail as distinct from those of the other promotional forces? Well, we can't—completely, at least. We doubt, in fact, that a completely accurate measurement ever will be possible in our operation. That's because we believe that to achieve their maximum results, our three most important sales promotional influences are interdependent.

Nevertheless, we are convinced that some degree of actual sales measurement of the effectiveness of our direct mail is possible. We have tried a number of methods and, from our experience so far, we have come to rely most strongly on what might be called the method of controlled experiment. One of these experiments will be described in some detail.

Let us call the product in this experiment Prescription Product No. 1984. Product No. 1984 is a good product. It has very substantial prescription sales possibilities. It is therapeutically up-to-date, not out-moded by some new medical development or discovery. No. 1984 is not exclusive or semi-exclusive with Abbott, there being fifty-two competitive products of like or similar composition in a market dominated by the products of three of our larger competitors.

At the time our experiment was started, we were not doing well with No. 1984—we do have products like that, you know. The product had been introduced two or three years before and had been the object of a fair amount of advertising and sales effort. But after an initial, fairly substantial flurry of sales, it slowly began to die. Our salesmen became discouraged with No. 1984 and stopped promoting it on their calls to physicians. Advertising support for the product declined.

Then on June 1, 1951, we launched our direct mail experiment. Four relatively small areas of the country were chosen. Selection was based on several considerations. In three of the four areas the average sale of Product No. 1984 per physician was at, or below, our national average for the item. One test area chosen was well above the national average sale per physician for No. 1984 for a quite obvious reason: It is harder to increase a relatively large, than a relatively small, sale. The four areas were widely separated geographically; they were largely self-contained in wholesale service; and they had closely comparable adjacent areas for use as controls.

(Continued on page 405)

HOFFMANN-LA ROCHE, INC.

CIBA PHARMACEUTICAL PRODUCTS

F.D.C. ACT

Since 1938, Congress has repeatedly amended the Food, Drug, and Cosmetic Act to deal with new problems as they arose. Examples are the amendment dealing with the certification of antibiotics and insulin, the Durham-Humphrey amendment prohibiting over-the-counter sale of dangerous drugs, the amendment dealing with the authority to make factory inspections, the Hale amendment to simplify the promulgation of food standards, and the most recent amendment establishing a simplified procedure by means of which safe tolerances for useful pesticides may be set.

All this adds up to the fact that on the whole the law has been kept abreast of current problems and is a reasonably adequate instrument of consumer protection. These amendments, desirable as they are, are not however self-enforcing. Each adds significantly to the task of enforcing the statute.

Every person in the United States has a right to expect that this law will operate for his protection. In 1910 the population of the United States was 92 million, and only 65 per cent of this 92 million lived in cities and towns. The other 35 per cent lived on farms where they grew most of their own foods. By 1952 the total population receiving protection under this statute had grown to 157 million, 85 per cent of whom lived in cities and towns. Thus the number of consumers entitled to protection had increased very substantially during this period.

The production of the farms of the United States is another yardstick to measure the increase in basic commodities subject to this law. If we assume that the average farm production during the period from 1935 to 1939 will be arbitrarily assigned the figure of 100, you will find that total farm production rose from about 105 in 1935 to 125 in 1950. Actually, production of such basic raw commodities as vegetables, food grains, poultry, and eggs increased from 25 to 75 per cent.

Increasingly complex manufacturing operations characterize almost all our food industries. During the last seven years the output of frozen foods has more than tripled. In 1939, the average large retail grocer carried 1,000 items; today the same store carries 5,000 items.

Similar changes in the importance and variety of drug products have also occurred since the Food, Drug, and Cosmetic Act of 1938 was enacted. It is estimated that 50 per cent of the medicines prescribed by physicians today were unheard of 15 years ago. Drugs are more potent and more powerful and can also be more harmful if they are impure or not of the proper standard.

In contrasting 1939 with 1952, we find that in the field of endocrines such as hormones, ACTH, and cortisone, where ten million dollars' worth were produced in 1939 the output had grown to ninety million dollars in 1952. Antibiotics had not been heard of in 1939, but their value at the manufacturer's level had grown to 160 million dollars by 1952.

The growth in production of drugs like the sulfonamides has been spectacular and has imposed much greater responsibility on the Food and Drug Administration.

To discharge these enforcement responsibilities under the Act, the Food and Drug Administration now employs a total of 789 people. In addition, 172 positions are budgeted to deal with certification services. Of the enforcement personnel a field staff of 540 includes approximately 210 inspectors and 153 chemists. The Washington offices include 122 scientists, 38 people involved in administration, and the necessary complement of clerks, laboratory helpers, etc.

Since adequate enforcement of the Food, Drug, and Cosmetic Act in all its aspects is an obvious impossibility with the staff available, it is essential to establish priorities for work allocation. We plan, therefore, to give first attention to problems involving hazards to health; second, to violations involving decomposition, filth and insanitation; and third, to violations which constitute economic cheats such as short weight, water substituted for valuable food, substandard foods and other similar violations.

Using these priorities results in the allocation of 29 per cent of our staff time to drugs, 67 per cent to foods, and a very small percentage to cosmetics, colors, etc. Because of the limitation of our facilities we find that we must devote almost all our time to programs dealing with hazards to health and those involving insanitation,

*Abstracted from address before American Bar Association, Chicago, August 17.

Enforcement*

by George P. Larrick U.S. COMMISSIONER OF FOOD AND DRUGS

filth, and decomposition. For the most part we must ignore violations involving economic cheats.

Educational work and cooperation with consumer, scientific, and industry groups is a very important part of food and drug law enforcement. The objectives are to obtain the greatest possible voluntary compliance by manufacturers and shippers. To the extent that consumers understand the law, they will get more out of it. We must have the cooperation of scientific groups, physicians, bacteriologists, chemists, and others. We must establish lines of communication and liaison with State and local food and drug officials and with all segments of industry.

These objectives are achieved by advice, published articles, interviews, correspondence, enforcement procedures, conversations between management and the inspectors at the time of factory visits, hearings, and many informal discussions at trade meetings and elsewhere.

In taking an inventory of the effectiveness of this law, it is noted that there are 96,000 establishments that manufacture, warehouse, or otherwise deal extensively in foods, drugs, or cosmetics in interstate commerce; 17,000 of these are in the field of cereal and flour; 13,000 in the dairy business. And so it goes with vegetables, fruits, bakery products, spices, fish, and the whole gamut of foods, drugs, and cosmetics. In addition to the 96,000 establishments which do a large interstate business, the law deals to some extent with the practices of 55,000 retail drug stores and 525,000 public eating places. The statute further provides that foods, drugs, and cosmetics imported from abroad shall be inspected at the ports of entry.

In this brief review of a few of the important administrative responsibilities under the statute, we choose the handling of new drugs as an example. It is the manufacturer's responsibility to make comprehensive chemical tests so that he will know that each batch of the new drug is of identical composition. He then makes tests on animals to determine the harmful effects, if any, of the new drug. Finally, the manufacturer tests the product on a relatively small number of people.

All of this scientific evidence is accumulated and submitted to the Medical Division for review. If the physicians, chemists, pharmacologists, and others who review the data believe it to be safe, it is released for sale.

Unfortunately, science has not as yet devised test procedures which duplicate in every way the hazards which may manifest themselves when a new drug is administered to millions of people. Side effects which occur only once in every five thousand or ten thousand people may be missed in the pilot test. These side effects may however be serious and may even result in death. So the Food and Drug Administration's responsibility for new drugs does not stop when the new-drug application is made effective. Instead, if it is to discharge its full responsibility, the drug must be followed to the hospital and to the physician's office so that a reappraisal can be made as to its safety under actual conditions of wide scale use.

In spite of the care exercised by food and drug manufacturers human errors and carelessness are never completely overcome. During the fiscal year, 1953, on forty different occasions dangerous drugs had to be recalled from the market. Some of these were drugs for injection which contained living bacteria, others were seriously deficient in strength, and still others were mislabeled, usually because the wrong label had been placed on the packages.

The same general problem arose twelve times in the food field. Here the dangers were related to chemical poisoning, some involved bacteriological contamination and, in one instance, illness resulted from a nutritional deficiency. Our technique for dealing with this type of problem has changed over the years.

(Continued on page 404)

Pharmacy in PICTURES

CARL WILHELM SCHEELE (1742-1786)

Greatest of pharmacist-chemists, Carl Wilhelm Scheele, as apprentice and apothecary, experimented constantly in Swedish apothecary shops and gave the world many organic chemical discoveries, including oxygen, chlorine, fruit acids and glycerine that contribute to today's vast industry, wealth, daily life and comforts.

Nine new original oil paintings in the unique "History of Pharmacy" series were presented to the American Pharmaceutical Association at its recent annual convention by Parke, Davis & Company. This makes a total of 29 of these paintings by 39-year-old Detroit Artist Robert A. Thom, who was commissioned by Parke, Davis to paint this series.

Originally to be painted at the rate of six a year, starting in 1951, and ending in 1956, the total presented to the A.Ph.A. now stands at 29, and the completion date has been set ahead to 1957. First of their kind pertaining to pharmacy, the paintings graphically show highlights in the development of the profession.

To date, 22 of the paintings have appeared as inserts in Modern Pharmacy, published by Parke, Davis for approximately 85,000 pharmacists in the United States, Canada, Puerto Rico, Hawaii, the Philippines, and the Canal Zone. Pharmacists in this country and overseas have received window displays of the paintings, and George A. Bender, editor of Modern Pharmacy, said that the 1954 displays will be ready soon. Mr. Bende conceived the idea of the paintings.

Many outside the profession of pharmacy have expressed considerable interest in the paintings. Mr. Bender said that art prints have been sent to physicians, nurses, educational institutions, libraries, hospitals, and others who requested them.

AMERICA'S FIRST APOTHECARY GENERAL (1775-1783)

First American Apothecary General was Bostonian Andrew Craigie, commissioned in 1777. Previously, he had served Massachusetts' Committee of Safety as apothecary. He took part in the Battle of Bunker Hill and ably served the American forces throughout the Revolution, organizing drug procurement, manufacture, military supply and distribution.

CAVENTOU, PELLETIER AND QUININE (about 1820)

The team of French pharmacists and organic chemists, Pierre-Joseph Pelletier and Joseph-Bienaime Caventou, isolated many plant constituents in their Parisian apothecary shop laboratory. But their greatest contribution was the extraction, purification and manufacture of quinine and cinchonine from cinchona (Peruvian) barks.

THE MARSHALL APOTHECARY (1729-1825)

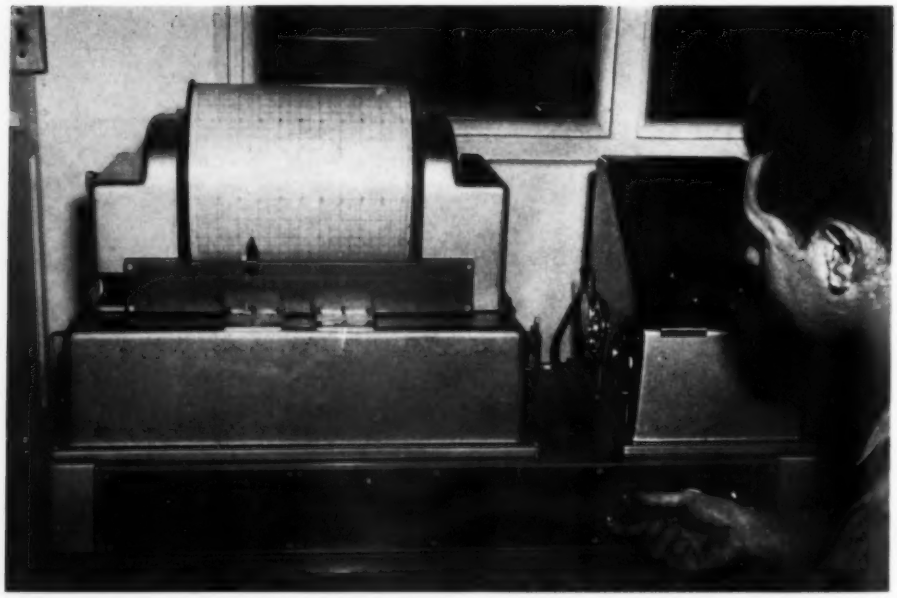
Christopher Marshall's apothecary shop in Philadelphia lasted nearly a century and became a leading retail store, practical training school for pharmacists, nucleus of manufacturing, and wartime supply depot. His sons, Charles and Christopher, Jr., carried on the traditions and earned individual fame.

AMERICA'S FIRST HOSPITAL PHARMACY

America's first hospital pharmacy began operations in 1752, one year after Pennsylvania Hospital was established with Benjamin Franklin's help in a converted home in Philadelphia. John Morgan, first as hospital pharmacist, later as physician, championed independent practice of the two professions.

SERTURNER, FIRST ALKALOID CHEMIST (about 1816)

Friedrich Wilhelm Serturner, young German apothecary, discovered the procedure for separating plant alkaloids and isolated morphine from opium. Extensive experiments, including tests of morphine on himself and three friends, took place in his shop in Einbeck. Later, work was carried on in Hameln.



COURTESY THE PERKIN-ELMER CORPORATION

Infrared Spectroscopy

by Ernst T. Theimer, VAN AMERINGEN-HAEBLER, INC.

Recent papers on infrared applications in the field of essential oils and perfume materials[1,2,3,4] fail to provide specific answers to some questions which have arisen in the minds of the executive, the perfumer and the chemist interested in the field. One such question is "Which is more effective in differentiating between two similar compounds, the nose or infrared spectra?" As might be expected, the answer depends upon the particular case being studied.

Figure 1 shows a comparison of the spectra of methyl benzoate and ethyl benzoate. Here the odors, although they can be differentiated, are fairly similar but there is no question about the difference between the two spectra.

Figure 2 shows a comparison between two straight chain C-11 aldehydes, the one saturated, the other with a double bond in the 10-11 position. The odors of these aldehydes are quite similar but the spectra differ widely, as can be expected from a consideration of their chemical constitution.

In both of these examples the instrumental analysis can be considered as more certain than the olfactory analysis, particularly if mixtures are under consideration. As seen in Figure 2, quantitative measurement of

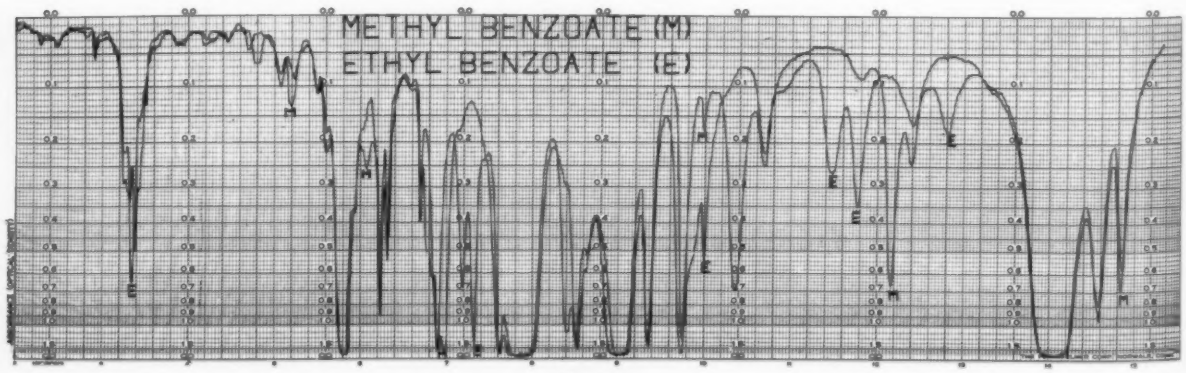


Figure 1

the intensity of the absorption at eleven microns, makes it possible to analyze a mixture of these two C-11 aldehydes with an accuracy of about two per cent. Such accuracy depends upon the selection of a suitable absorption maximum where there is a minimum of interference by the other constituent or constituents. Given such a point, the infrared spectra become ideal as an analytical tool.

the assay of a mixture of Nerol and Geraniol representing cuts from a very careful fractionation. These spectra show the expected differences[5] but these differences are small making quantitative analysis difficult. Nevertheless, this is still by far the best way of determining the composition of such mixtures using preferably the 8.75 micron absorption as a reference point. It should be pointed out that other possible components

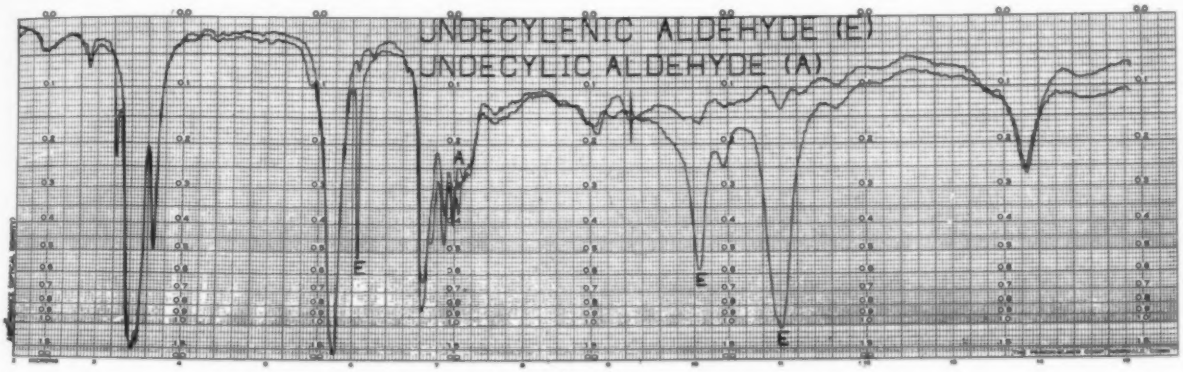


Figure 2

and Perfume Materials*

and Stanley K. Freeman, BENZOL PRODUCTS, INC.

In the case of methyl benzoate vs. ethyl benzoate, the percentage of methyl ester can be determined by an examination of the intensity of the absorption of 10.4 or 12.2 microns. The ethyl ester cannot be determined directly with quite the same accuracy, since the absorption intensities at the best points 11.5 and 11.8 are not nearly as great as in the case of the methyl ester maxima. Of course the ethyl ester could be determined by difference, but only if the product being examined was a mixture of the two esters only.

A practical application of this method of analysis is

of these mixtures, for example citronellol, will complicate the analysis. In any case it is necessary to have unequivocally pure samples of Nerol and Geraniol in order to establish a primary reference before th analysis of a mixture can be accomplished.

Another practical problem which can be solved by infrared analysis is the determination of α-isomethyl ionone (gamma methyl ionone) in a mixture with straight chain α-methyl ionone. Pure isomethyl ionone can be prepared by regeneration from the easily crystallizable semi-carbazone and normal α-methyl ionone by

(*Continued on page 396*)

*Delivered before Scientific Section, the Toilet Goods Association, May 13, 1954.

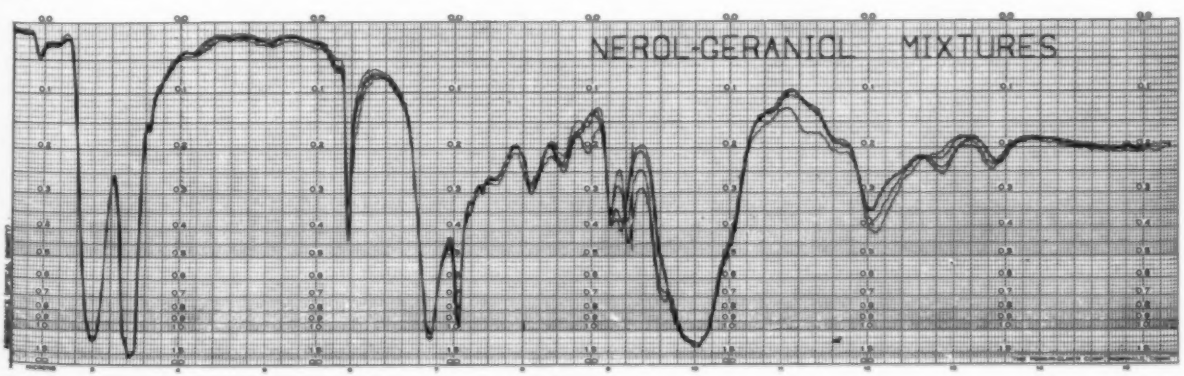


Figure 3

New Synthetic RHODINOL

GEORGE L. SCHULTZ, PRESIDENT OF SHULTON, AND STEPHEN P. JOFFRE DIRECTOR OF ORGANIC RESEARCH, CHECKING INFRA-RED ANALYSIS

A new synthetic rhodinol is now being produced by the Fine Chemical Division of Shulton, Inc., Clifton, N. J. Shulton recently released information on the manufacturing technique involved in the process as contained in a patent entitled, "Process of Making Rhodinol, Stephen P. Joffre, Assignor to Shulton, Inc." The new process involves the isomerization of citronellol to a true rhodinol by exposing liquid citronellol, either at room temperature or at elevated temperature, up to its boiling point, to a strong ultra-violet light for a sufficient duration so that by simple rectification a high yield of the more valuable rhodinol can be obtained. The process may be practiced with or without the admixture of a metallic catalyst in the citronellol, and, preferably, is carried out in an inert atmosphere. The citronellol utilized in this practice may be of either natural or synthetic origin.

It was found that rhodinol could be prepared using either a batch or continuous system. In the batch system, citronellol is placed in a quartz container or some other material through which ultra-violet light is passed. In the continuous system, citronellol can be circulated through a heated quartz tube or the like through which ultra-violet light is directed. Approximately 80 per cent yields of rhodinol can be obtained. The metallic catalysts or promotors which may be utilized in this process may be one or several of the group consisting of mercuric oxide, vanadium pentoxide, etc. The best conditions of time and temperature are a function of the nature of the source of the ultra-violet light.

Investigators believe that citronellol contains more of the substance in its alpha or limonene form, identified by the Geneva system of chemical nomenclature as 2,6-dimethyl-1-octen-8-o1; whereas rhodinol is supposed to contain essentially equal parts of the limolene and terpinolene forms, the latter identified as 2,6-dimethyl-2-octen-8-ol, the beta form of this substance. Both citronellol and its isomer rhodinol are used extensively in creation of perfumes. According to perfumers, rhodinol is the more valuable substance because it is characterized by a deeper, longer lasting rose note. This is in contrast to the cheaper citronellol which is much lighter in odor characteristic and has a readily identifiable odor quality which reveals its origin of citronella oil.

For most purposes where a fine rose odor has been desired, the rhodinol used was obtained by the fractionation of Reunion geranium oil, also known as geranium Bourbon. According to Shulton, "For the first time, perfumers have a true, quality rhodinol available at approximately half the price of the traditional geranium Bourbon product. Additional advantage to the perfume industry is the fact that rhodinol Shulton is standard in price, being free of the normally wide price variations characteristic of geranium Bourbon rhodinol."

In identifying Rhodinol Shulton, infra-red studies have shown a definite double bond shifting in the 6.0 micron region. In addition, odor studies have shown that rhodinol Shulton is comparable to high grade geranium Bourbon rhodinol, according to Shulton.

OLIVER MARTON AND STEVE JOFFRE: THROUGH PERFUMER'S ART AND SCIENTIST'S SKILL, A NEW PRODUCT

SHULTON'S JOFFRE WITH PILOT UNIT DEVELOPED FOR NEW RHODINOL PROCESS

Look to

SHULTON

for new

chemical

achievements

Rhodinol Shulton, *for example . . .*

- a true Rhodinol
- made by a new process
- with consistent odor and chemical character
- approximately half the cost to you of similar material ex Geranium Oil
- thus Shulton makes possible the use of a pure Rhodinol in innumerable formulas without prohibitive cost

Rhodinol Shulton is another successful product resulting from our extensive chemical research program. Among others now available are:

Vanitrope® brand of propenyl guaethol
Floralizer #12 • Lignyl Acetate • Geranic Ether

Samples and prices available on request

SHULTON, Inc.
FINE CHEMICALS DIVISION

Plant:
Route 46, Clifton, N.J.

Sales Office:
630 Fifth Avenue, New York 20, N.Y.

CALUMET'S NEW

PUSH-BUTTON

Plastic Compact

FOR COMPRESSED POWDER

with PUSH BUTTON CLOSURE and METAL HINGE

NO BROKEN FINGER NAILS
NO BROKEN CASES
POSITIVE, EASY
OPENING AND CLOSING

MADE IN STANDARD SIZE AND ALL COLORS.

WIRE, WRITE, OR TELEPHONE FOR SAMPLES AND QUOTATIONS.

CALUMET *Manufacturing Co., Inc.*

565 FIFTH AVENUE, NEW YORK 17, NEW YORK, MURRAY HILL 8-4270

PLANTS: NEW YORK CITY, BLOOMFIELD, N. J.

IN CANADA: CALUMET DIVISION OF ERIC H. HARDMAN, LTD. 137 WELLINGTON ST., WEST TORONTO, CANADA

IT'S NEW
IT'S CALUMETRIC*

By eliminating
metal parts we save you
money on your

Swivel
LIPSTICK CASES

better
for
less

Free Wheeling
Rich Low Brass Container
Zephyr-Smooth Propel-Repel Action
New Jeweler's Finish
Center pin moulding assures
texture and
color control.
Made in two sizes — .477 and .500 cups.

*Pat. Pending

SEND FOR EYE-OPENING SAMPLES AND PRICES

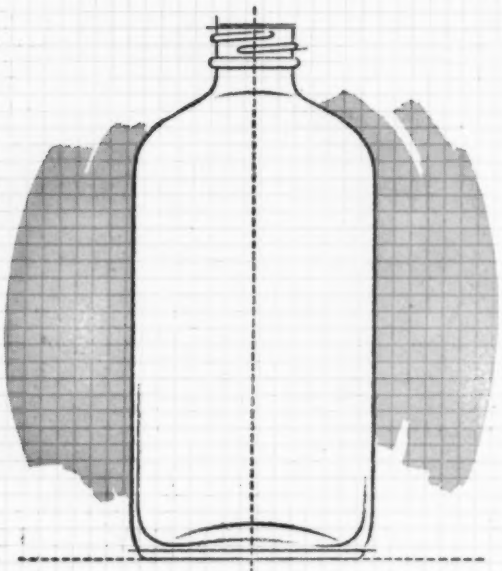
CALUMET

CALUMET
Manufacturing Co., Inc.
565 FIFTH AVENUE,
NEW YORK 17, N. Y.
MUrray Hill 8-4270

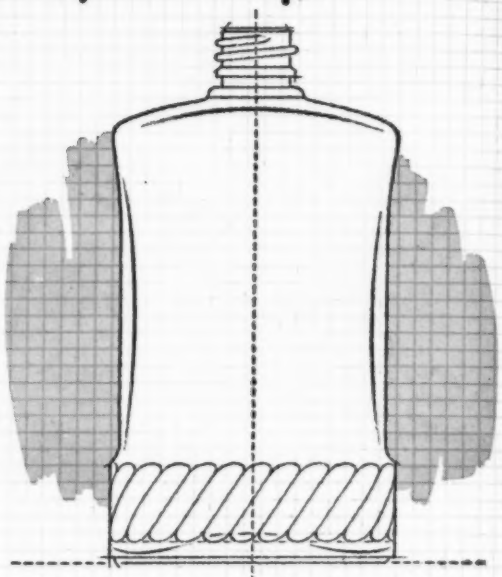
PLANTS: New York City,
Bloomfield, New Jersey

In Canada:
CALUMET DIVISION OF
ERIC H. HARDMAN, LTD.
137 Wellington Street, West,
Toronto, Canada

Which one is the SALESpackage?



Is it the package where product protection is the dominant consideration?



Or the package of high style and distinctiveness?

Or the package with advantages for the retailer, or in actual consumption?

The answer has to be: ALL of them

But few product problems fall into one exclusive category.

The Owens-Illinois method of systematic exposure of packaging problems to the engineer, the designer and the marketer yields an impressive consistency in producing top packaging values.

DURAGLAS CONTAINERS
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

Not when you use KIMPAK !

New KIMPAK 301 is the practical solution to safe packaging of fragile cosmetic containers. With the ability to absorb liquids up to 16 times its own weight in a matter of seconds, new KIMPAK 301 more than meets Parcel Post regulations. New KIMPAK 301's shock-absorbing characteristic provides positive cushioning protection against these major causes of breakage:

1. Shock and rough handling. KIMPAK is a soft, cushioning material that forms an effective shock absorbent barrier against these shipping hazards. It molds itself readily to irregularly shaped items and eliminates dangerous high and low spots.

2. Movement within the package. KIMPAK is absolutely uniform in thickness from end to end and edge to edge. This permits a tight, snug pack with the fragile containers nestled into the KIMPAK to prevent movement.

Breakage is but *one* of the problems encountered in cosmetic packaging. Specify KIMPAK (either decorative white 201 or the new low-cost utility 301) and these problems are solved. For more details concerning KIMPAK, mail coupon below.

SPECIFY KIMPAK TO SOLVE THESE INTERIOR PACKAGING PROBLEMS:

Leakage
Breakage
Conformability
Ease of handling
Appearance
Cleanliness

Whatever your protective interior packaging requirements, there is a Kimpak specification that does the job... better!

Kimberly Clark
INTERIOR PACKAGING
KIMPAK

KIMBERLY-CLARK CORPORATION
Neenah, Wisconsin

We would like to learn how KIMPAK can provide better protection for our products. Please send complete information.

Name .....

Firm .....

Street Address .....

City ..... *Zone* ..... *State* .....

Aerosol? Yes! Glass? Yes! Safe? Yes!

New Wheaton glass-lined plastic bottles in both stock and custom-made designs

Wheaton Plastics Company has created an exciting *new kind* of packaging which offers an important promotional plus.

The Wrisley name on the sample above is convincing evidence that shrewd merchandisers recognize the value of this plus.

Never before has a bottle successfully combined aerosol, glass and plastic. Here is true aerosol . . . tiny droplets in a perfect, touch-controlled spray. And—so vital to the manufacturer—here is 100% *safety*, recognized by insurance companies. If the bottle is dropped, the plastic cushions the shock. But even though the glass should break, *it cannot cut through the plastic cover.* The danger of glass splinters is eliminated.

Like that of Wrisley, your own design can be custom-molded—or you can choose from available stock designs. The plastic can be transparent, translucent or opaque, and there is a full range of colors. We can silk-screen any design in any color on the plastic or the glass itself.

It doesn't matter whether or not you require aerosol. If glass is the proper container for your product—and if safety is important—here may be the ideal solution to all your packaging problems. Your query will bring full information promptly.

Patent pending

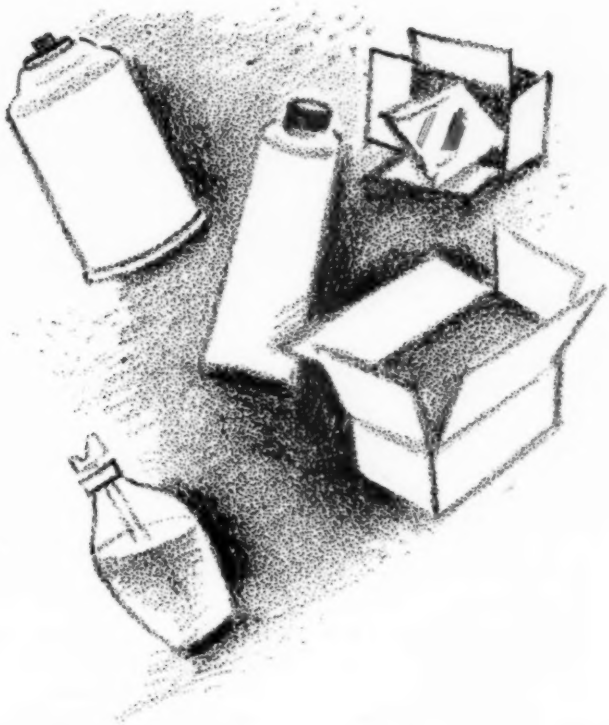
Three of the stock designs immediately available.

WHEATON PLASTICS COMPANY

MAYS LANDING, N.J.

What's Coming in PACKAGING?*

by John A. Warren
PACKAGING CONSULTANT, AMERICAN HOME PRODUCTS CORPORATION



In 1953 can manufacturers shipped 38 billion metal cans. The research programs of the can industry are striving constantly to make cans available for more products and to reduce costs. In an effort to conserve or eliminate tin, can manufacturers are developing and using organic coating compounds and side-seam cements. Some of these compounds are applied over tinplate and others are enameled to blackplate. The results are encouraging, as witnessed by the production of motor-oil cans from blackplate with cemented side seams. Organic coatings will widen the market for the tin can, permitting more products to be packed. The coatings are now applied to sheet stock.

As the demand increases and production-handling knowledge expands, we may expect the coating to be adhesed in strip form. Steel coated with some resins can be deep drawn and these resins can be surface coated to steel which will protect it before it has been shaped.

Due to research of a can company, the new low-pressure cans and valves were created. The drawn and concaved-seamed bottom can with the domed top will dispense a host of new products and the growth of this new industry will surprise many with the advent of new automatic pressure-filled equipment.

Aseptic canning is a process that may affect can specifications, and the cans for some sizes and products may probably be made of lighter base weight tinplate. The end-over-end agitating cooker principle obtains maximum heat penetration when the can is turned end-over-end in its rotation around an external axis of relatively short radius at a speed producing a centrifugal force in the can equal to gravity.

Aluminum cans are under vigorous research. Cemented sideseam cans are being tested. It is my personal observation that aluminum cans will not be a serious threat to tin cans until the price differential between aluminum ingots and aluminum sheet is narrowed to the same proportion as that between steel ingot and electrolytic tinplate. Drawn aluminum cans are available, but I cannot understand why they are not cheaper. The spread between a drawn aerosol tin can and a soldered can for aerosol is under $1 per thousand.

Glassware. We may expect greater uniformity in the production of glassware with the installation of better physical control of glass processes. We will have more exacting adherences to functional specifications. Glass containers for the aerosol pressure-type products became available this year and producers state that there is no hazard in their handling.

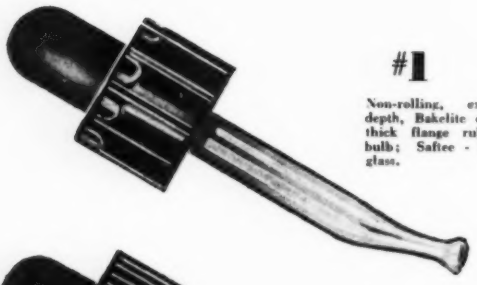
Collapsible tubes. The use of this popular-type container will increase with the application of new resins for coatings. The installation of ovens with heat capacity up to 450 deg. F. and with dwell time within the ovens up to 9 min. will permit tube manufacturers to use a greater variety of resin coatings.

Cartons. With users demanding 90 per cent or better efficiency on high-speed cartoning lines, board mills will produce paperboard of more uniform caliper and weight. More and more carton plants are introducing effective quality-control systems within their plant operations. The finer printing surfaces of patent-coated and clay-coated boards will reflect in more highly decorated cartons with intense competition for the customer's eye. More process reproduction will be used

*Abstracted from paper delivered before the 23rd National Packaging Conference.

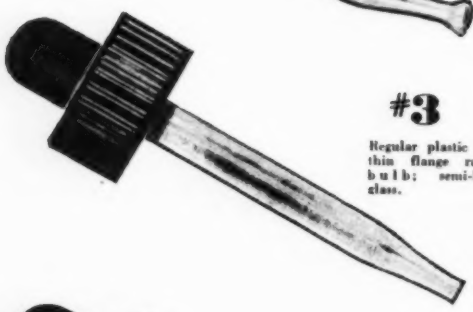
NEW PERFECTION = DROPPING PARTS

QUALITY UNIFORMITY CLEANLINESS SERVICE



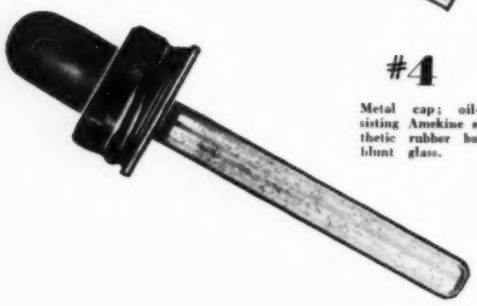
#1

Non-rolling, extra-depth, Bakelite cap; thick flange rubber bulb; Saftee - ball glass.



#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.



#4

Metal cap; oil-resisting Amekine synthetic rubber bulb; blunt glass.

By the Originators and World's Largest Manufacturers of Screw-Cap Dropping Parts

Since 1931, when the screw-cap dropping part was originated by Pennsylvania Glass Products, the world-wide acceptance of New Perfection has been increasing. The fact that the New Perfection Dropping Part is the most practical and sanitary dispensing unit for liquid preparations accounts for its popularity and the steady growth of our operations is due to the efficiency with which our products are manufactured and distributed.

Our exacting standards for quality, uniformity and cleanliness guarantee that each shipment will meet your most rigid specifications. Our policy is to produce and sell the best in dropping parts—and thus merit your continued patronage in the future as we have in the past.

New Modernistic bottle. Designed to lie flat for convenient labeling. Oval front provides ample label space.

New Perfection Dropping Parts, either plain or CALIBRATED IN COLOR, can be supplied to fit your bottle or with our new Modernistic style bottles. Our bottles are available in Amber, Blue, Green or Clear glass in 2 cc, ⅛, ¼, ½, 1 and 2 oz. capacities. Special oil-resisting AMEKINE synthetic rubber bulbs can be supplied for use with oil products, or natural rubber bulbs for general usage.

#2

Non-rolling, extra-depth, Bakelite cap; thick flange rubber bulb; special beat glass (CALIBRATED in color)

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

by merchandisers and they will have the advantage of rotogravure combined with litho and letterpress application and high-speed, five-color letterpress. The boxmaker has learned to use gloss inks with special surface boards.

When high tensile and tear requirements must be met, or where a container will have rough handling, the paperboard mills are now producing a sheet with kraft, or kraft scrap findings in the finish. This board has a bursting strength of eight lbs. per 0.01 of caliper or a 0.020 sheet would have a Mullen or Eddy bursting test of 160 lbs.

Foil-laminated board with good protective properties for moisture and grease is finding use as a package in which the product itself is processed. Bakers are using foil-laminated board cartons for brown-and-serve rolls.

There is active investigation of the use of hot melts for protective coatings and decorative effect of extreme high gloss in the carton field. The application of the hot-melt in rolls, sheets and individual blanks is being investigated.

Labels. Industry is familiar with delayed-action heat-seal labels, which are tack free until heat activated. With the introduction of automatic labeling equipment and manual applying units, this type of heat-activated labeling is growing more popular where waterproof and permanent bonds are desired.

Solid boxes. The solid-box industry is now converting from batch manufacturing to continuous-line production as the result of new machine developments. Continuous boxmaking will mean lower costs for set-up boxes and better boxes.

Corrugated cases. Cases lined with paper or plastic bags are being used to ship flour, lard, granular and viscous products. In the place of fluted corrugations, a sheet has been introduced with honeycomb-type separations between the liners. This honeycombed sheet is being used successfully for pallet decking and inner packing where strong, unyielding cushioning is indicated.

Films and laminates. Today, films are the quickest-growing branch of packaging. Film manufacturers will have to devote more research to the handling and machining of their products. The laminator and convertor of films must recognize that printing and lamination should be a science and not an art. The machine designer must engineer his equipment to handle the available films with their present shortcomings.

Polyethylene I have found to be the best sealing compound when you handle a micronized product on fast unit-packet machines and as a laminate when you need a limp sheet for pillow-type packages. Further developments in transparency, printing quality and machine performance of this useful film are indicated. May I stress, however, that there are too many variations in the quality of poly film now being produced. Some sheets are superior to others.

Saran film's outstanding chemical resistance is adaptable to lining fibre drums and for cap liners with products containing essential oils. Some work has been done in the processing of food with Saran packages. There are some things to be desired in Saran film, such as control of the film sealing on high-speed packaging machines due to its critical heat-temperature contrast. However, this phase is being worked on and improvements are appearing in recent shipments. The improved low-temperature Saran film should add new users.

Mylar is the latest product of duPont that is arousing great interest. The reaction products of ethylene glycol and terephthalic acid have been formed into a transparent and highly flexible film. Among the properties of this polyester film are: insensitivity to moisture, resistance to solvent and chemical attach, a dielectric strength greater than almost every known insulating material, a range of thickness of ¼ of a mill (0.000025) to 7½ mills (0.0075 in.); an operating temperature range from minus 60 deg. C. to 150 deg. C. Mylar has a tensile strength one-third that of machine steel. Prices at present range from $3.55 to $4.80 per lb. With more users, I am sure this price will come down.

With the growth of self-service merchandising, the use of film will continue to grow, since in this type of retailing the package is its own best salesman.

I believe there is a great future in the new vacuum-formed plastic package. Inexpensive plastic molds are used in vacuum-formed processing.

There are many interesting machinery developments in engineering research and in shake-down stages.

A new rotary pre-measured filler is being tried out on a liquid production line. It has possibilities, in my judgment, if it is used for only one or two products. Evidently, the automatic thermoplastic labeling machines have been accepted by industry, for there are now several other companies entering the manufacture of equipment for thermoplastic labels in both roll- and spot-label form.

There are both mechanical and hydraulic torque controls being built into one of the national CT automatic capping machines. A new straight-line, high-speed capper is now on trial in two large manufacturing plants. One unit will run 88 mm. caps at speeds up to 300 a min. and the other unit will handle various sizes of caps on the same unit—cap sizes running from 10 to 88 mm. The speed of this machine is approximately 200 per min.

In the cartoning field we will see within the next six months two new simple semi-automatic cartoners and also one automatic cartoner with some new engineering devices for handling all types of cartons.

In the make-up stage is a new fast automatic machine for the making of individual packets with speeds estimated to be up to 150 packages per min.—the filling and forming on the machine done in two stages.

Also under development are two new processes for decorating plastic bottles. One is a photographic process scheme and the other is direct transfer of decals.

The next five years should be very interesting ones for the packaging industry, and I predict that we will see radical changes in both the can and film-producing industries.

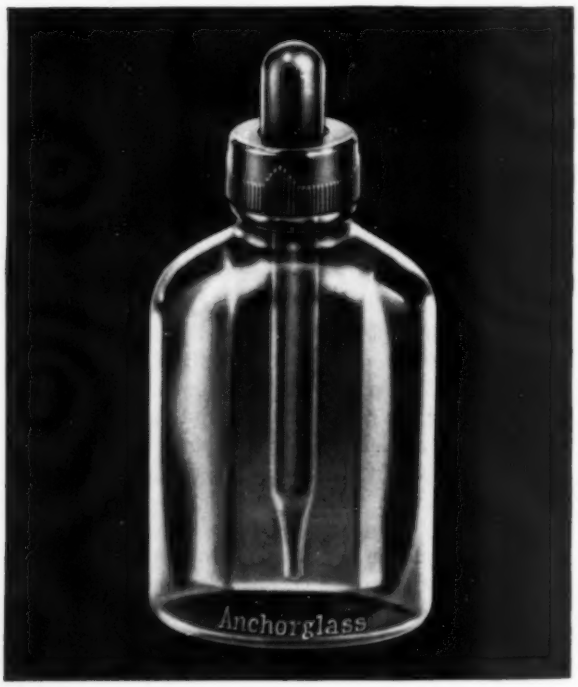
MANY Styles AND Sizes

...BUT ALL ANCHORGLASS CONTAINERS HAVE THE SAME QUALITIES

THEY are uniformly strong, tough, dependable lightweight glass containers—high in chemical durability, accurate in dimensions, capacity and finish. They are designed to withstand the knocks of modern high speed production lines, handling and transportation.

Anchorglass containers are the result of practical engineered designs, careful selection and control of raw materials, uniform distribution of glass, precise temperature control in annealing and thorough quality control through laboratory tests and regular inspections.

If you package or contemplate packaging in glass let us send you sample containers with suitable closures for your particular needs. The services of our Package Engineering and Research Laboratories are also available to help you solve glass packaging problems.



Anchorglass® Dropper Ovals are available in ¼, ½, 1 and 2 ounce sizes, in amber glass. The popular two ounce bottle at right is sealed with a 20 mm. Anchor "N" style Molded Cap.

ANCHOR HOCKING

GLASS CORPORATION
LANCASTER, OHIO

★

The Most Famous Name in Glass

Packaging and Selling

The Tougher Fight to Be Heard

The fight to be heard is getting tougher and tougher in business. Advertising has increased to an overwhelming volume of different impressions to a point where the Gray Advertising Agency states that a $250,000 annual expenditure in advertising is the starting point in the hope of being heard by the American public. Colgate's Chairman of the Board in his annual report, makes the statement that to introduce a new product today requires $5,000,000.

If all of the trade-mark names in active commercial existence were added up together they would certainly exceed 50,000 words. If the advertised brand names that are clamoring, with fair activity, for the consumer's attention and memory were added up, it would certainly be over 10,000 words. Even this last demand for recognition of words (brands) on the part of American business exceeds the average vocabulary of consumers by one to 200 per cent.

So far as the ethical pharmaceutical manufacturer is concerned, probably the toughest and the nearest to a hopeless fight to be heard is in his direct-by-mail.

A few years ago this office arranged with a single doctor to save all of his mailing pieces for us over a two-week period. At the end of this two weeks, we collected this tonnage in burlap bags and had it carted back to the office where we measured the weight, the number of lines of printed material and particularly estimated the reading time to intelligently peruse this mail.

We forget the exact results of this minor survey but retain the clear recollection that if the doctor had carefully and patiently perused all of the mailing material sent to him during these two weeks, he would have had to discontinue his practice completely, give up his recreation and his family life and sacrifice about half of his sleep.

The Midwest Pharmaceutical Advertising Club at their Second Annual Seminar, took particular note of this overwhelming flood of mail to the doctor. Said Dr. George Kadira, Medical Director of New Orleans, "The doctor is just too busy to read a large amount of advertising and has most of it screened by his receptionist or nurse."

"Very little direct mail gets on the doctor's desk," Dr. Kadira says, "and what does has been selected by a girl who really can't evaluate it properly."

"I doubt that the average doctor even has time to read the material that actually does get to him. There is just too much of it. For instance, last Friday I received sixteen pieces of direct mail from pharmaceutical companies and Monday I had another thirty-four pieces on my desk."

To most men concerned with sales and advertising it is no news that the struggle to get even a fleeting moment of the buyer's attention is becoming increasingly more difficult and more expensive. It is also no news to them that a large, if unknown percentage of all these efforts are simply dollars down the drain. Unfortunately, there is no easy answer to this problem and the probability is that the answer, when it comes, will not lie within the province of either the advertising manager or the sales manager. In most packaged products, and that is particularly true in the pharmaceutical and the cosmetic branch of the industry, there are far too many completely similar products fighting for place with a high percentage of them uninvited, unwanted, and destined before too long for the ashcan. Meanwhile, in their struggle for existence they add to the confusion, the waste and the declining productiveness of advertising.

Problems of the Giant Package

There appears to be a trend in several industries toward the giant size package or at least the bigger package. As competition increases and promotions and price cutting increases, the "economy package" as it is more often called, may have a real period of popular try-out. The giant size or the "economy package" is apt to run into some very serious difficulties wherever it is offered for self-service selling and to a lesser extent in the traditional store. The reason for this is that retailers find it difficult to adjust shelf or counter space to these giant packages. Some of these packages simply will not fit on the available shelf space. In other cases, they either displace packages the retailer does not want hidden or they make an awkward appearance on the counter or the shelf.

There is a lot of logic behind the "economy package" for many products and for certain promotions, but this package may encounter such serious difficulties at the point of sale and so in impulse selling, as to largely negate its value.

Door-to-Door Wholesaling

The recent 27th Annual Meeting of the National Association of Food Distributors centers attention on a method of distribution which is growing by leaps and bounds in the food industry. This distribution method is interesting because there seems to be no reason why, in certain large metropolitan markets, this same way of marketing goods should not spread to other industries.

The members of this food association are wholesalers who specialize in store-door selling from trucks operated by driver salesmen.

This type of selling has long been a major factor in certain food specialties and it has recently been entering into the distribution of many non-food specialties.

If this form of wholesaling continues to grow, it would seem likely that it would soon touch on other fields. Whether this means that the wholesalers of other industries such as drug wholesalers, will start experimenting with this method of handling large-volume, quick turnover products or whether it means that the food jobbers who are now experimenting with non-food items will start moving down the block a few stores to stop at a drug store with the non-food specialties that they carry, is something worth watching.

Packaging Live Fish

Planting fish in lakes and streams is becoming big business around the United States. Some of these journeys from the hatchery to the stream have been pretty tough on the fish fingerlings, because in some less accessible places they are dumped from an airplane. Now the drug trade is coming to the rescue of the fish hatchery men and the fish by administering mild sedatives to the fingerlings.

The California Department of Fish and Game have been experimenting with drugged trout. They have discovered that certain drugs such as sodium amytal and other barbiturates decreases oxygen consumption by the fish. This is due to the fact that mild sedation restricts fish movements, resulting in less need for oxygen.

The drugs are mixed with the water and are absorbed through the fish gills.

Less Apparel

In 1953, consumers spent for clothing and shoes only nine cents out of the dollar. This is the lowest ratio in twenty-five years, according to the Commerce Department report. The study shows that apparel and shoes expenditures rose only 10 per cent for the period 1946-53, compared with the rise of 56 per cent in consumers' disposable income.

Some Think It's Television

Some months ago, we commented on a series of advertisements by Macy's Department Store which consisted of full-page newspaper advertisements urging people to see the leading moving picture which was featured in this advertisement. The purpose of these advertisements, as expressed at the time, was that sales of apparel and many other products were being injured because people stay at home to look at television and that this stay-at-home social trend was seriously affecting a great many different trades.

That this was not a far-fetched idea is supported by a recent statement of the CIO textile Workers' Union. The rise of television is cited by the Union as one of the causes of the depressed state of the textile industry.

The new medium, according to the Union, has added to the post-war tendency to avoid "dressing up" as "viewers stay at home and loll around." Another social tendency that the Union doesn't like is what they call "suburbization."

Fun for Kids

Schenley Laboratories, Inc., is determined to make medicine fun for the new generation.

A unique sampling kit for Ediol Oral fat emulsion is packaged in a carton lithographed in full color which shows the smiling faces of eight young Indians. Each

box also contains a toy balloon (blue for boys, pink for girls), a foil-wrapped sample of the fat emulsion, paper sampling cup and a leaflet of instructions for the child's parent describing a number of tasteful ways Ediol may be served.

Quote

"After you've done a thing the same way for two years look it over carefully. After five years look at it with suspicion. After ten years, throw it away and start all over again."

Alfred Edward Perlman,
the new President of the New York
Central Railroad

Dangers of Self Service

Victor Lebow, who is a business consultant, had this to say recently in an article in the "Journal of Retailing."

"The panaceas of self-service and self-selection place the retailer more completely under the domination of the national advertiser than ever before.

"The retailer abdicates his function as a purveyor of goods, as a style and fashion leader, as the promoter and the impressario of the articles of consumption that represent the status and the prestige aspirations of America."

"Let's realize that self-service selling is not a cure-all—it may, in fact, prove a danger for many products and many businesses."

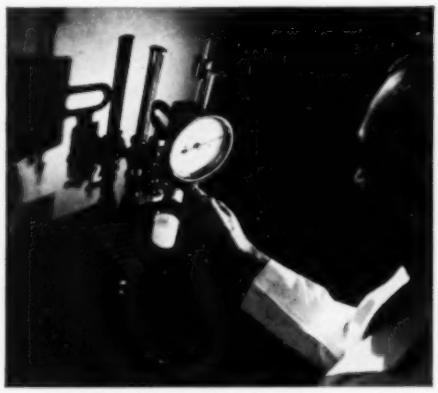
Don't buy closures by guesswork—

Careful and rigid inspection of liner and cap is one of the many steps Owens-Illinois takes to produce better, fully controlled quality.

when it's so easy to have our technicians help you select one that's exactly right for your product

CLOSURES PLAY AN IMPORTANT ROLE in the sale and resale of your product. They must be efficient . . . they must be convenient to use . . . they must be economical. So you must select yours with care.

Finding new and better liner materials for your product calls for evaluation under rigidly controlled storage conditions such as are provided by this humidity control cabinet.



Another control test with the precision penetrometer measures the hardness of waxes and other liner materials for closures.

Packaging as a sales tool is more important than ever before. Cap designs can actually help a product's sales. Here, careful matching of inks assures you bright, colorful closure designs to attract impulse sales.

BEFORE:

On the left, something's needed to give this package the extra sell that makes the difference between many a "pick-up" and a "pass-by" in today's self-service selling.

AFTER:

On the right, this salespackage has *it*—a smart, colorful eye-catching closure-label design. It's easy to see why it helps draw impulse sales. The product will now flag attention at knee-level as well as eye-level position.

METAL AND PLASTIC CLOSURES
AN (O-I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

Beauty Treatment

Home beauty treatments depend upon your products of course, but also upon the cosmetic-ware that is equally at home on dealers' shelves and dressing tables.

That's where H-A comes in.

H-A cosmetic-ware is made to sell on dealers' shelves and to say "use me" on consumer dressing tables.

Take these pluses, and add efficiency on the production line, and you will know that beauty treatments start with H-A cosmetic packages.

HAZEL-ATLAS GLASS COMPANY WHEELING, W. VA.

Quote of the Month

Richard J. Blum, executive head of Saks—Thirty-fourth Street recently stated at the School of Retailing of New York University: "It is time now for the retailer, the retailer who wants to do something new in retailing, to resurrect the salesman. Whenever we think in terms of overproduction, our economy is bound to falter and hesitate. Whenever we think in terms of goods consumption, our economy will go aggressively forward.

Wanted—A Foundation for This Industry

The Super-market Institute of 500 North Dearborn Street, Chicago, Illinois, recently published "A Plan for Cooperative Market Research in the Food Distribution Industry," by William Applebaum.

This is an interesting brochure because, of all branches of distribution through the retail trade, we have always believed that the food industry has attained the highest degree of economy and efficiency.

In a foreward to this study, Malcolm P. McNair the well-known retail specialist of the Harvard Graduate School of Business Administration has this to say:

"Fundamentally, by making it easier and more attractive for the American housewife (and her husband and family) to buy, supermarkets have increased the consumption of foods, boosted the size of the average sales check, achieved efficiencies which result in sales per employee twice as great as those in department stores, and reduced the margins required to cover retail food distribution costs from 24 per cent shown by the Harvard study twenty years ago to the current figure of under 18 per cent."

In spite of this record in reduced distribution costs at the retail level the Supermarket Institute Executives Institute Executives Committee in November, 1953, went on record as follows:

"We recommend the establishment of a foundation which shall be jointly supported and directed by every organization which can be interested in joining in a common endeavor, through industry cooperative research, to improve methods and eliminate waste in distribution of food products, and to increase efficiency in moving food from the farm to the table."

We can say that the food industry has more of a moral obligation and faces a greater economic need to reduce distribution costs as compared to any other industry. Nevertheless, we do think it strange that the most efficient branch of distribution should be so actively concerned in eliminating waste and should be the leader in seeking new ways to reduce the cost of distribution It has often been stated that a large part of the technological development of the last generation has been largely dissipated in rising distribution costs.

This industry has one of the most serious problems of any industry in its costs of distribution. In some branches, notably cosmetics and ethical pharmaceuticals, there is an extravagant stretch between factory costs and the price the consumer pays.

There is little doubt that the discount house, the successor to the pineboard store, is a symptom of these super-selling costs. As some of the products of this industry move over into distribution into the super-market store, we wonder how long they can stand side by side with food products and not feel the pressure for reducing selling costs. We also wonder, as we have several times before in this department, how Fair Trade is going to stand up under the pressure, which is bound to arrive some day, from the super-market's 18 per cent cost of operation as compared to the drugstore's 28 per cent cost of operation and the department store's 38 per cent cost of operation. It does not seem as if we can continue to talk loudly about our free competitive system when a manufacturer tries to straddle these three different branches of operation with a legalized fixed price to sustain an equal position in that highly competitive trio.

Breck Survey

The Seventh Annual Breck survey on hair and beauty shop attendance shows a healthy picture of the consumer attitude toward the beauty shop. The number of women who visit beauty shops is growing, the number of visits per customer remains high and complaints about the service are decreasing.

At the same time, the use of home permanents continues to increase.

This increasing use of the beauty parlor, as well as the home permanent, indicates how vigorously the hair market has been expanding.

In this survey better than one out of three mentioned a single hair problem while almost half named two or more problems for a total of 83 per cent describing one or more hair problems. Most important complaints include:

One of the three has dandruff or complains of dry hair.

One out of five worries about hair falling out.

One out of six says hair is too oily, or is hard to manage.

The percentage who find that their hair is too dry increases sharply with age. On the other hand, younger women are more likely than older women to complain of dandruff, or that their hair is too oily.

Trends in Buying

Social trends, together with population growth and population trends are bringing about shifts in consumer buying habits that provide both business opportunities and business warnings. Population has increased from 138 million in 1940 to 151 million in 1950 and to 162 million at present. Accompanying this growth in population have been a number of changing factors that are already drastically affecting the way people buy, when they buy and where they buy.

In 1953, there were 1,500,000 marriages. For the rest of the present decade about 1,000,000 marriages a year are expected.

The decline in marriages means a decline in the birthrate, which means that before long businesses catering to infants and small children must expect a decline in consumption.

At the same time, we face within the next several years an increase of 5,000,000 in our grammar school population and almost 9,000,000 in the six through to 19 age group. This larger population moving up into this particular consuming group means a substantially in-

THE *Aerosol Valve* FOR YOUR PRODUCT *by Precision*

• So widespread has been the public acceptance and demand for self-dispensing packages equipped with colorful Precision valves, that new type products and additional brands are added daily to the long list enjoying the plus values offered by Precision. To keep pace with this tremendous growth, Precision's production and research are continually expanding both here and abroad so that your package may have the merchandising and technical advantages of a Precision valve regardless of the product, container or filling method involved.

Why is Precision the Leader?

DESIGN . . . The wide range of Precision valves featuring positive, fingertip operation assures a successful solution to your specific spray characteristic requirements.

CONTAINER . . . Precision has a valve engineered for the aerosol container of your choice plus the widest selection of plastic colors to enhance the beauty of your package.

PRODUCTS . . . Plastic construction eliminates corrosion enabling Precision valves to perform efficiently for all products whether foam, residual or true aerosol.

FILLING METHOD . . . All types of aerosol products with Precision valves, are being filled successfully by pressure as well as refrigeration at the lowest cost.

QUALITY . . . Precision's basic research, production skill, development techniques and 100% inspection of over 100,000,000 time-tested valves is your assurance of high quality.

ECONOMY . . . The highest plant production efficiency, as well as the lowest rejection rates for filled containers, assures maximum economy with Precision valves.

AVAILABILITY . . . The world's largest aerosol valve manufacturing facilities, are combined with the latest production methods and techniques, to give production schedules that assure prompt deliveries.

• We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.

PRECISION

Precision Valve Corporation

700 NEPPERHAN AVENUE • YONKERS 3, NEW YORK

creasing market for school supplies, sporting goods, youth apparel, etc.

Adults over fifty are another group now indicating a rapid increase. In 1940 there were 9,000,000 in this group, in 1950, 12,270,000 and this rate is increasing. There is already a substantial number of businesses developing based upon the needs of older people. This has been particularly true in medicine but we are yet to hear from our first cosmetic company.

Another trend reported is a long-continued population movement of young adults from the interior of the United States toward the Coastal cities bordering the Great Lakes, the Atlantic, the Pacific and The Gulf of Mexico.

Unbelievable

Advertisers who use such copy themes as "unbelievable price reductions" are apt to be believed to their own detriment. The public just doesn't fall for extravagant or exaggerated claims today. This is a finding in a survey by Duquesne University in cooperation with the Pittsburgh Business Bureau in a study titled "What People Believe about Advertising Price Cuts."

Working with Chain Drug Stores

The National Association of Trade Chain Drugstores presented to their recent Convention an attitude survey prepared by McCann-Erickson, Inc., an advertising agency. In a brief digest of this survey, we found the following of interest.

When a manufacturer comes in with a proposal on a new product, what do the chains look for? The obvious answer is the right one, that is volume and profit. Seventy-seven per cent of these chains stated that the first consideration in buying any product is: Can it be promoted? Will it move?

In addition to the promotion-wise value of the product and its volume, 67 per cent of the chains stress other factors such as "(a) The reputation of the manufacturers, (b) The extent of advertising support, (c) The adequacy of the margin."

The chains reported that they had many promotional facilities available to manufacturers. The most important, according to the chains, are: PM's, Cooperative Advertising and Display.

The chains believe that for toiletries, cosmetics or proprietaries the most important aids for sale are: (a) PM's, (b) Cooperative advertising and (c) Display, in that order.

When the chains were asked, "What method of manufacturers' payment on PM's do you prefer?", the chains reported that 82 per cent prefer one of the following two (a) Automatic deduction, (b) Periodic payments of purchases. When the chains were asked, how do you pay the PM's to the sales clerks?, 83 per cent said "Consolidate earnings on all manufacturers' goods and pay clerks by one check."

Newspapers' cooperative advertising gives the following advantages to manufacturers, according to these chains. (a) It can give the product prestige; (b) It can give local flavor to a national product; (c) It can tie the chains up closely with the manufacturers' national advertising; (d) It can spearhead a national campaign; (e) It can influence other retailers; (f) It can give added stimulation to the effort at the point of sales. ninety-six per cent of all chains report their lineage rates below the national rate.

When manufacturers' plans are weak, chains believe that this is so because of the following reasons: (a) Insufficient advertising; (b) Duplication and (c) Poor timing. By poor timing the chains usually mean, "Not enough time to mobilize facilities." By duplication, the chain means that too many brands in the same product field are running promotions at the same time.

Putting this in somewhat a different way the chains believe that the following four major reasons account for the failure of a manufacturer's promotion to come up to expectations:

1. The manufacturer does not give the chain enough time to organize.
2. The chain does not follow through properly.
3. The chain has too many other promotions running at the same time.
4. The manufacturer gives insufficient support to the promotion in the form of advertising and promotional monies.

This survey indicates that the chains have made a very careful study of their market. Eighty-eight per cent of all chains report that they are happy to be consulted by the manufacturer on marketing problems.

The Secret Is Out

An English pharmaceutical company uses the special issue of a magazine to advertise as follows: "We welcome the opportunity presented by this special issue to speak briefly but publicly of our activities, for we believe you will wish to learn about the little-known but nevertheless essential work of one of those pharmaceutical manufacturers who, because they advertise to the medical and allied professions only, are technically described as "ethical."

"Although we spend many thousands of pounds every year to inform the doctor on our products, this is one of the rare occasions when we advertise in a 'non-technical' publication. It is unlikely that we will often do so again."

Fight for the Impulse

The "Impulse" purchase, a discovery of this decade, is rapidly becoming the major key in package merchandising. Even the multi-million dollar advertisers and the multi-staffed advertising agencies are finding out that impulse purchasing is a vital element in their marketing program.

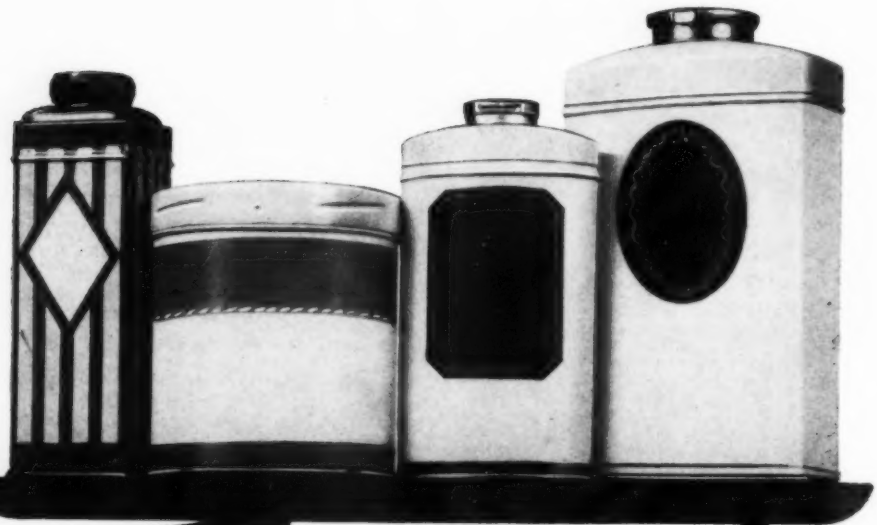
Just recently, the National Canners' Association interviewed a group of housewives after their shopping visit to a super-market in six major cities and came to the conclusion that the impulse purchase must be of major concern to the canners.

As competition increases and as advertising reaches the limits to which it can perform in influencing a sale, the battle will certainly wage hotter and hotter at the point of sale. This is the place where intra-industry competition is going to be most vividly realized.

Your product will be

SITTING PRETTY

in a Continental container



● On the store counter or in the home, your product will *look* and *act* its very best in a Continental container. Our artists and lithographers take infinite pains to make packages that are *easy to look at* . . . our design people work equally hard to make packages that are *easy to use*. And, always available to our customers are the skilled services of engineers, scientists and package machinery specialists. Why not see what Continental's Tailor-Made Package Service can do for you — personally.

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

Package Doin's . . .

Travel Kit

Jean Nate has a new plastic black lace Travel Kit which contains a four-ounce plastic bottle of Friction Pour le Bain and a cake of Jean Nate quick-lathering soap in its own plastic lace envelope.

Advantages in Folding Cartons

The folding cartons which the Lord Baltimore Press is producing for packaging Revlon's new "Kissing Pink" lipstick and nail enamel have the following advantages over the set-up boxes previously used by the company for similar merchandise. They can be shipped flat, says Lord Baltimore, thereby saving on shipping costs; they can be stored flat at Revlon's plant until ready for use, saving valuable storage space; and they can be printed simultaneously with a smaller companion box carrying the same design and colors, thus achieving a desirable uniformity of color. The folding cartons, continues the manufacturer, cost less to make than the set-up boxes.

Unique Purse-Size Flacon

Guerlain has introduced a purse-size perfume in two of its most famous fragrances, L'Heure Bleue and Mitsouko. The-purse size flacon, a delicate fluted bottle, is tucked into a leather-like case which makes the package large enough to hold a full ¼-ounce of perfume, yet small enough to fit into the daintiest evening bag.

Picture Book Toiletries

Fay Wood Corp. has introduced a line of toiletries for children, Picture Book Toiletries. These are packed in gift containers resembling children's picture books. The theme, "For Good and Happy Children," launches a line consisting of bubble bath powder, toilet water and liquid bubble bath.

Each individual item, in turn, is packaged in its own exclusive Picture Book.

Replique Perfume Atomizer

Replique has introduced an automatic purse atomizer containing perfume. It is completely sealed, non-leakable, and the perfume will not evaporate. The atomizer is made in a dull gold finish, holding ¼ ounce of perfume.

New Package for Skan Labs.

Skan Laboratories, Inc. has released a new product, Rinse Away, in a new package. No directions appear on the bottle itself but are taken care of by means of a printed folder in matching color attached by a cord to the bottle neck. The glass is by Hazel-Atlas, and decorating by Ceramic Decorating Co., Los Angeles.

Fay Wood Picture Book Toiletries

Aerosol Shave Cream Package

The House for Men, Inc. has designed a special barber pole type package for their new item, "His" Quick Shave. The 11-ounce aerosol container is burgundy and cream and comes packed six to a display carton.

Serpentine Lipstick Case

Lentheric has packaged its new lipstick, Apple of Eden, in a jeweled serpentine case. A golden jeweled serpent entwines itself around the case until its head comes to rest on the top, next to a small bright red apple.

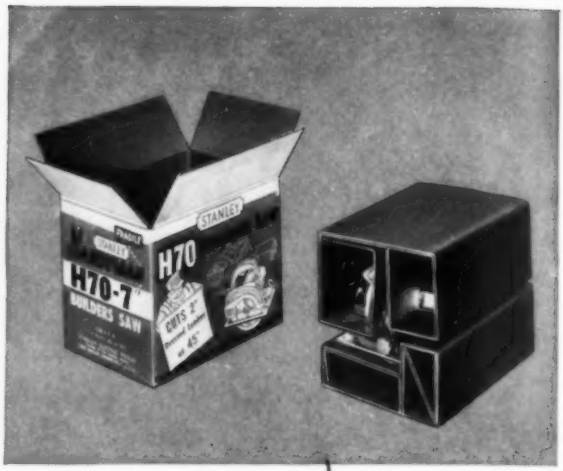
Guerlain flacon

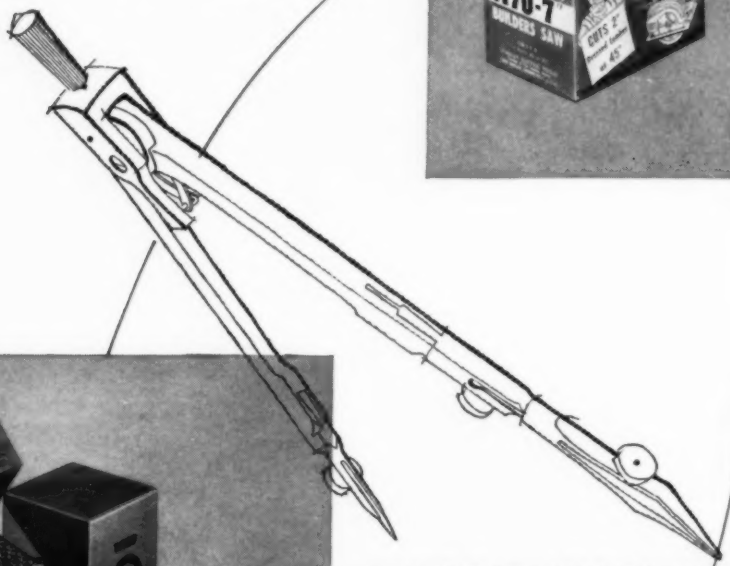
Replique atomizer

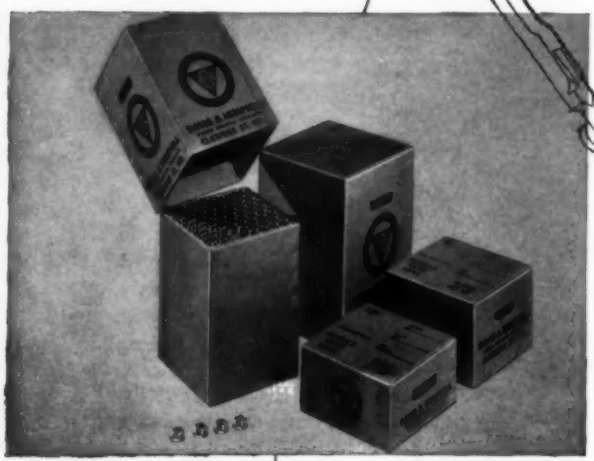
Skan Laboratories

Lentheric lipstick

DESIGNED
FOR SAFETY







ENGINEERED
FOR ECONOMY

STYLED
FOR SALES IMPACT

HINDE & DAUCH

Authority on Packaging

12 FACTORIES • 40 SALES OFFICES

Write for the new booklet, Creative Package Design, Hinde & Dauch, Sandusky 9 Ohio

IMPULSE APPEAL

Vibrant color . . . the sensory appeal of warm lightness . . . the promise of convenience . . .
THAT'S THE PLAXPAK® BOTTLE.

PLAX

USE APPEAL

The infinite ease of a one-hand squeeze . . .
the perfect safety of unbreakability . . .
THAT'S THE PLAXPAK BOTTLE.

PLAX

PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES • PLAXPAK BOTTLES

REPEAT APPEAL

A magnet at the point-of-purchase . . . an aid to your product at the point-of-use . . . it sells, then resells . . .
THAT'S THE PLAXPAK BOTTLE.

PLAX

The Plaxpak polyethylene bottle is packed with merchandising magic. And Plax alone has the experience to exploit this magic to its fullest in behalf of your product. Our packaging staff is at your service —
For packaging that sells at the point-of-sale and resells at the point-of-use.

PLAX CORPORATION

PLAX

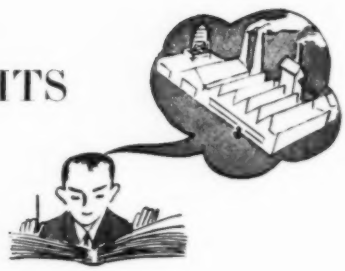
WEST HARTFORD, CONNECTICUT

Plax Canada, Ltd., Montreal and Toronto

Patent THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr.**

PATENT ATTORNEY



Seventh Year of Operation of the U.S. Trade Mark Act of 1946

It has been eight years since the Federal trade mark statutes were given a complete and long-needed overhauling by the passage of the Lanham Trade Mark Act of 1946. Since the Act provided that it did not go into operation until 1947 it has had seven years of operation behind it up to the present.

As many know, it is often very difficult to forecast how the courts will interpret statutes, and this is particularly true of a comprehensive statute such as the Lanham Act. Consequently, trade mark owners and users owe a real debt of gratitude to Dr. Walter J. Derenberg for his annual reviews on the operation of the Lanham Act. Dr. Derenberg, a leading authority on trade marks in the U.S.A., has again recently come through with such a report, and while much of it is of interest primarily to lawyers, nevertheless, his report contains enough of general business interest to warrant spotlighting here.

Dr. Derenberg divides his report into three parts:

Part I: Legislative and Administrative Developments.

Part II: Interpretation of the Lanham Act by the Patent Office and Courts.

Part III: Trade Mark Infringement and Unfair Competition.

Some of the highlights from Dr. Derenberg's report will now be considered.

PART I: LEGISLATIVE AND ADMINISTRATIVE DEVELOPMENTS

While there have been some pending federal bills affecting trade marks, actual enactment has been lacking. The State of New York and Canada, however, have recently passed legislation in this field.

New York became the third state to pass what is called an "Antidilution Statute," Massachusetts and Illinois having previously passed such legislation. This legislation provides that likelihood of injury to business reputation or of dilution of the distinctive quality of a trade mark or trade name shall be ground for relief, notwithstanding the absence of competition between the parties or the absence of confusion as to the source of goods or services. In other words, the owner of a trade mark in one field is protected by such legislation against the use of the same or confusingly similar mark even against non-competitors.

That the Lanham Act does not give such protection was recently decided by a Federal court in California, which held that, TIME, Incorporated, the well-known publisher, could not prevent the use of T. I. M. E., Incorporated, by an operator of a freight service.

Canada's trade mark act became effective on July 1, 1954 and while the act embodies some U. S. concepts of trade mark law anyone using trade marks in Canada would be well advised to evaluate the present status of the mark in view of the new act. Perhaps the outstanding feature of the new act from the point of view of U. S. companies is that it is now perfectly legal to license a trade mark in Canada so long as the licensee is registered first as a Registered User.

PART II: INTERPRETATION OF THE LANHAM ACT BY THE PATENT OFFICE AND COURTS

Problems of Trade Mark "Use" Style and Trade Marks

Mere style or grade designations which do not simultaneously serve a trade mark function are not registrable on the Principal Register. However, if grade or style marks in fact perform a dual function, that is if they are employed as trade marks also they are given trade mark protection in spite of the fact that they are also used as style designations.

It is noted that in a series of recent decisions, Assistant Commissioner Leeds, while recognizing these basic rules, has indicated a more rigid policy in determining the registrability of such marks. In one case, registration was refused on the phrase, "Woden's Baby born on Wednesday" for dolls, the Assistant Commissioner concluding that the alleged mark denoted a doll rather than the manufacturer and did not identify the source of the doll. In another case, the Commissioner held that "Rail Bird" was merely a certain style of Stetson hat. In this case the word actually appeared in the hat band but the Commissioner held that in the absence of evidence of advertising or other trade mark use the use of the word in the hat band was not enough to overcome the evidence indicating that the word was used only to designate a particular style.

"Ingredient" Mark

These marks are those which are intended to designate one particular part of an article or one of its ingredients rather than the article as a whole. According to the report, stricter standards are now being applied as regards regis-

it should be what you like too!

More and more lately, what she likes in the way of bottles and jars are plastics by IMCO. She likes the fact that plastics are breakproof...rustproof...leakproof...so light and handy to use. But above all, she likes the color...the designs...the downright beauty of IMCO plastic containers. You'll like IMCO plastic containers too. You save on the lightweight shipping costs, to say nothing of ending your breakage worries. And your label is hot-stamped right into the container. Mrs. Consumer makes the choice that gives the sale either to you or your competitor. Couldn't your package stand more sales appeal to her? Why not give her what you and she both want? Drop us a line for the whole story.

LIGHT — NON-BREAKABLE — ANY SHAPE OR COLOR UNDER THE SUN

IMCO CONTAINER CORPORATION

EMPIRE STATE BUILDING, RM. 6204
350 FIFTH AVE., NEW YORK, N. Y.

75TH AND CLEVELAND STREETS
KANSAS CITY 30, MISSOURI

NEW...

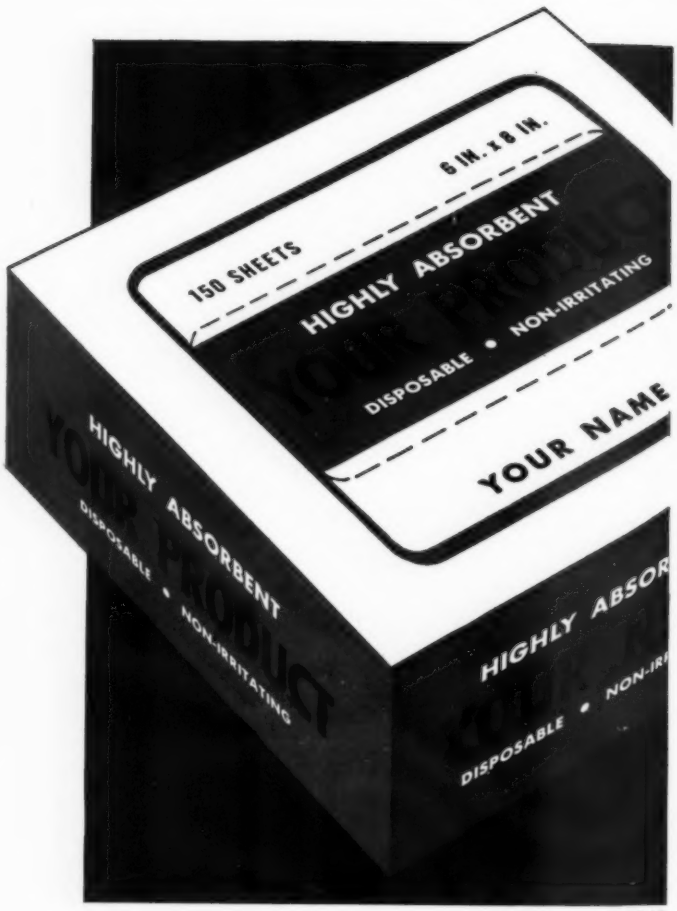
Steribord cartons won't discolor or lose shape under sterilization

Starting right now, you don't have to worry about your sterilized packages looking old and dull when they arrive on drug counters.

Gair's new Steribord cartons, designed to meet your requirements, solve the problem of bandage, cotton and baby product packages sagging, turning dull and losing sales appeal when sterilized.

Here's what this new Gair Steribord folding carton does:

- *Takes* commercial steam sterilization with no visible discoloration or drop in brightness, color or printing at normal viewing distance.
- *Maintains* dimensional stability through sterilization — a Steribord package will not warp or lose its squareness.
- *Protects* mercurochrome treated products pre-packaged before sterilization, holds staining to the minimum.



FC.4.8

WRITE FOR FREE SAMPLE

Write New Products Division, Research Department, Robert Gair Company, Inc., Uncasville, Conn., for a sample of the Steribord itself. Sterilize it in your own plant along with the carton you're now using. After you've seen how Gair Steribord stands up in a comparison test, our package engineers will be glad to work with you on the specific details of creating a carton that will not only protect but will also help sell your product.

GAIR

FOLDING CARTONS
SHIPPING CONTAINERS
PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17

trability of these marks. The use of the word "Lurex" to identify an ingredient in a rodenticide was recently held not to be a trade mark use of the word and, like "Irium" in the Pepsodent case, was not registrable. A similar result was reached in the "Penaten" case, where it was held that this word was used only to describe or name an ingredient or a feature of Woodbury's face cream.

Trade Mark "Use" Generally

Strict use requirements are noted in recent decisions of the Patent Office. The term "Photo-Electrode System" was held to be unregistrable because it was not used in a trade mark sense to indicate origin, but merely to describe the goods. Also registration of the word "ElectroniK" used in connection with other names was rejected on the ground that the word "ElectroniK" alone was not actually used as a trade mark but merely as a part of an integrated unit.

The Court of Customs and Patent Appeals recently upheld the Patent Office in refusing registration of the notation "Consistently Superior" as a trade mark for wrappers of bakery products on the ground that the words were not used to denote origin but merely as an adjunct to the applicant's trade name.

Use in Price-Lists, Catalogs, Samples, etc.

Traditionally, mere use of a trade mark on price list or invoices is not sufficient to establish trade mark use. In one case it was pointed out that a shipment from a plant in one state to the shipper's agent in another state was not a trade mark use, nor was the shipment of samples to an agent held to satisfy the use requirements. Similarly, mere shipment of samples by a foreign sales manager to one in the U. S. A. was held insufficient to establish first use of the mark in commerce with the United States. On the other hand, use catalogs was referred to in one case as use at least analogous to trade mark use.

Trade Mark Use by Agents or Distributors

In a recent case, Assistant Commissioner Leeds held that mere importation of foreign-made products by an agent or distributor will no longer constitute sufficient trade mark use so as to constitute such agent the owner of the trade mark for registration purposes. The case should be of widespread interest in both the drug and cosmetic fields.

Concurrent Use

The Lanham Act permitted for the first time, registration of the same or similar marks where the use was a lawful *concurrent* use. However, the Patent Office has taken a very strict stand on this matter and early in the history of the Lanham Act it held that the second user had to show use of his mark prior to the filing date of the trade mark application of the first user. Pointing up this strict viewpoint is a recent case in which Ford Motor Company and Lincoln Radio and Television Corp. filed parallel applications for the registration of the word "Lincoln." The parties themselves agreed that there would be no confusion among the purchasers resulting from the concurrent use of the word "Lincoln" and that they would confine their separate use of the mark to the specific products enumerated in their application. The parties further pointed out that they used different methods of distribution and that there never had been any evidence of confusion or mistake. The Motor Company sought registration in connection with radio receiving sets for use in automobiles and the other party sought registration of the word for television and receiving sets sold for use in buildings.

The Meaning of "Primarily Merely Descriptive"

A more liberal view of whether a mark is "primarily merely descriptive" or only "suggestive" appears to run through recent decisions of the Assistant Commissioner. Suggestive marks are registrable whereas descriptive marks are registrable on the Principal Register only if they have acquired distinctiveness. In a recent case, it was held that the mark "New Look" was neither descriptive nor deceptively mis-descriptive of baby pants. In another case the word, "Spring" was held not to be descriptive of carpet cushions or underlay. The word "Shortstop" for a liquid moisture-repellent material was also held to be suggestive only.

Of course, where the mark is for all practical purposes the name of the product, it will not only be held descriptive but in fact generic so that it will not help to try to show that your mark has acquired distinctiveness. A case in point involved the word "Shower-Aids" which was rejected on the ground that this was a term which other competitive manufacturers might normally use to describe their goods. Along the same line, the two registrations of the misspelled words pie dough, "PIDO" and "PY-DO" were cancelled as trade marks for a pie and pastry crust mix.

In the case of combination trade marks consisting of two or more descriptive words, the Court of Customs and Patent Appeals has taken a more liberal point of view and has ruled that on applicant may so combine a series of words into a unitary notation as to create a mark which, as a whole, will not be considered descriptive. Following this reasoning, the Commissioner allowed the mark "The Technical Trend" as applied to an investment advisory service even though the word "technical" was descriptive and the word "trend" was generic. The slogan "Be Sure with Pure" was recently held registrable as a service mark on the theory that the slogan suggests reliability or dependability and does not merely describe the quality of the service but at most suggests it.

The Patent Office may be even more lenient in the future in connection with combination marks as a result of its very recent reversal by the Court of Customs and Patent Appeals which held the notation, "BUTTER-NUT" registrable for candy.

What Constitutes "Primarily Merely a Surname"?

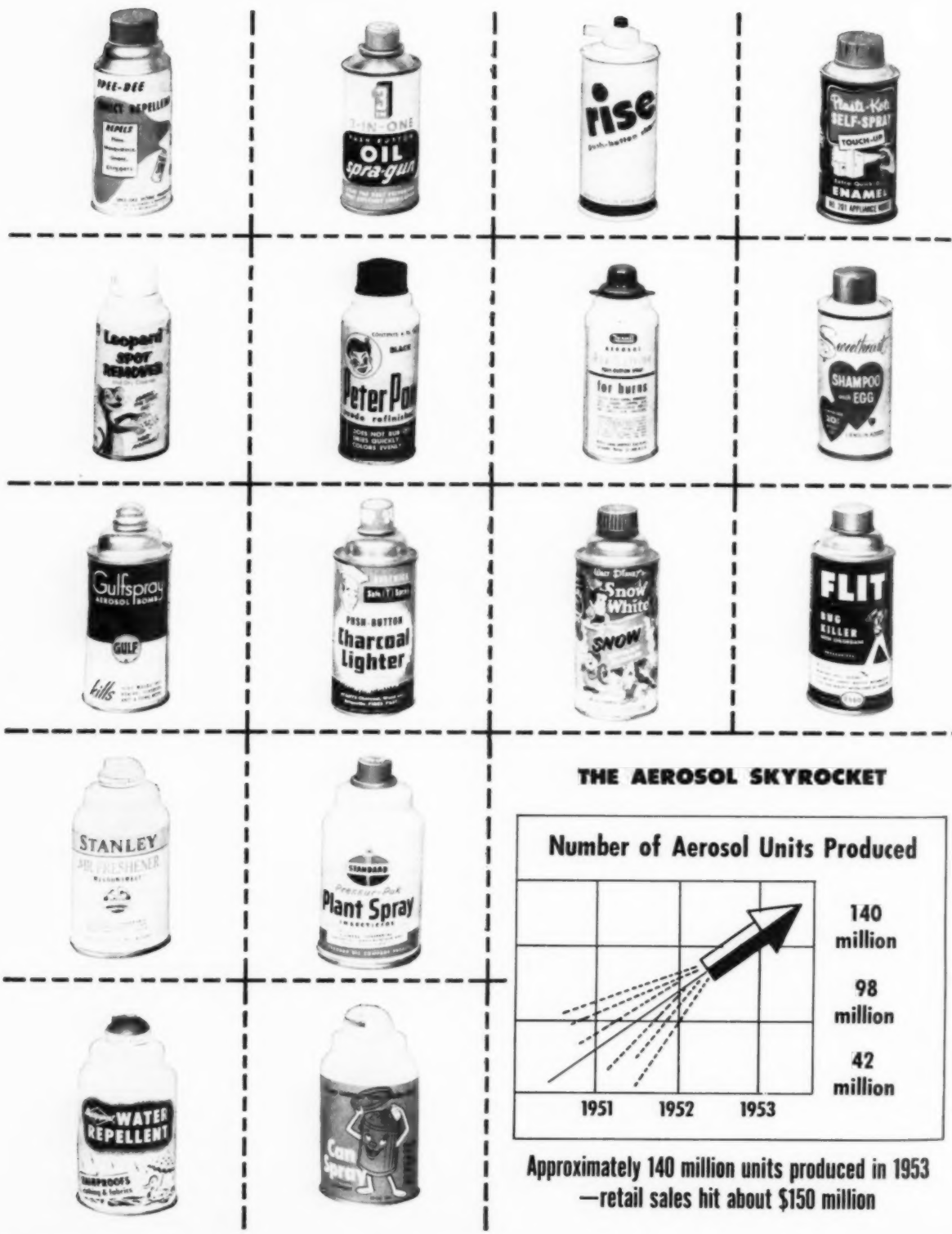
Under the statute marks which are primarily merely a surname are not registrable on the Principal Register unless they have acquired distinctiveness. The rulings of the Patent Office and Court of Customs and Patent Appeals leave the problem of registrability of family names somewhat beclouded with uncertainty. Dr. Derenberg reports that in cases involving unusual individual names of actual or fictitious persons, the present policy of the Patent Office appears to permit their registration without requiring any evidence of distinction. However, in situations in which a common name such as "John Smith" or "Paul Jones" are involved, the Patent Office will require such evidence.

Likelihood of Confusion

In the past a source of great difficulty in obtaining registration of trade marks has been the practice of the Patent Office to dissect a mark and reject the application on another mark which contains what the Patent Office considers to be the dominant part of the mark on which registration is sought. This situation is exemplified in a recent case where the Patent Office Examiner held

(Continued on page 414)

How to *CASH IN* on your newest



THE AEROSOL SKYROCKET

Approximately 140 million units produced in 1953 —retail sales hit about $150 million

and fastest-growing market

Aerosol-packaged products formulated with "Freon"* propellents set the profit-making pace

Call on Du Pont for the laboratory assistance and marketing information you need to enter the booming aerosol-product market. In the aerosol field you'll find new sales potential for many of your present products . . . vast possibilities for new product development.

Just look at the figures on the growth of aerosol products. Last year approximately 140 million aerosol units were produced, selling at retail for about $150 million. Shaving creams in aerosol containers jumped from 1952's figure of 16 million to approximately 30 million. In 1952 hair-lacquer production was included with six or seven other personal aerosol products that totaled sales of 8.7 million. In 1953 hair lacquers *alone* totaled 15 million! New products make marketing history every day—with the help of aerosol packaging.

Here's why consumers like aerosols

Ask consumers *why* they like aerosols—as we did. They'll tell you aerosol products are clean, non-messy, easy-to-use, effective, economical, fast, uncomplicated, convenient to buy and to store. The very fact that your product comes in an aerosol package brings you the benefits of this established consumer acceptance.

Far and away, most aerosol products on the market today get their "push" from a Du Pont "Freon" fluorinated hydrocarbon propellent. These propellents are safe . . . nonflammable, nonexplosive, virtually nontoxic . . . manufactured to rigid laboratory standards. They can be "tailored" to fit the pressure, stability and other requirements of your products.

Profit from our experience

Take advantage of the knowledge of aerosol manufacture and marketing Du Pont has gained in producing "Freon" propellents. You may find this background the key to entry in the profitable aerosol-product field. We'll be glad to send you the interesting booklet "Package for Profit." Or, perhaps you want some specific market-research data. For this material—or for technical assistance of any sort—mail the coupon below today. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

KINETIC

FREON

SAFE PROPELLENTS

**"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents*

DU PONT

REG. U. S. PAT. OFF.

Better Things for Better Living . . . through Chemistry

PIN THIS COUPON TO YOUR COMPANY LETTERHEAD

E. I. du Pont de Nemours & Co. (Inc.), Dept. DC.
Room N 11500, Wilmington 98, Delaware.

- ☐ Send the booklet "Package for Profit."
- ☐ Send market-research data.
- ☐ I am interested in technical assistance.

Name_____

Title_____

Whatever your **GLASS PACKAGING** problem . . .

GET *Ball* ON THE LINE!

BALL, a leading source of supply for glass containers and metal closures, can provide practical help on your packaging problems as well. And you can get this help through ONE source—our Technical Service Department.

Whether it's a problem of container design, specifications, performance on the line, processing or even a plant layout, Ball Technical Service can help you find the right answer.

For the finest in glass containers, metal closures, and technical know-how—call BALL first of all.

BALL BROTHERS COMPANY

Offices in All Principal Cities

LET US SEND YOU "The Doorway to Packaging Facts," with interesting details of the many tests that maintain Ball carton quality and economy. Address Ball Brothers Co., Dept. DC9, Muncie, Ind.

CALL BALL FOR QUALITY GLASS CONTAINERS, METAL CLOSURES, PACKAGING ENGINEERING SERVICE

Plants at: Muncie, Indiana • Chicago, Illinois (Closure Division) • Hillsboro, Illinois • Okmulgee, Oklahoma • El Monte, California

Here's a brand-new idea in cosmetic bottle caps

or, how to lick an old problem

SCOVILL DECIDED to do something about the cosmetic bottle cap problem. We got together with the Lumelite Corporation and developed a new polyethylene liner and a special cap to hold it.

This is a Grip-Tite, two-piece, concealed-thread cap, consisting of the metal outside shell and the threaded polyethylene insert. No internal liner for sealing purposes is required. In this cap, *the liner is part of the polyethylene inside shell.*

These caps are available in all the popular sizes from 13mm. to 24mm. They are ideal for both drug and cosmetic containers including spill-proof bottles.

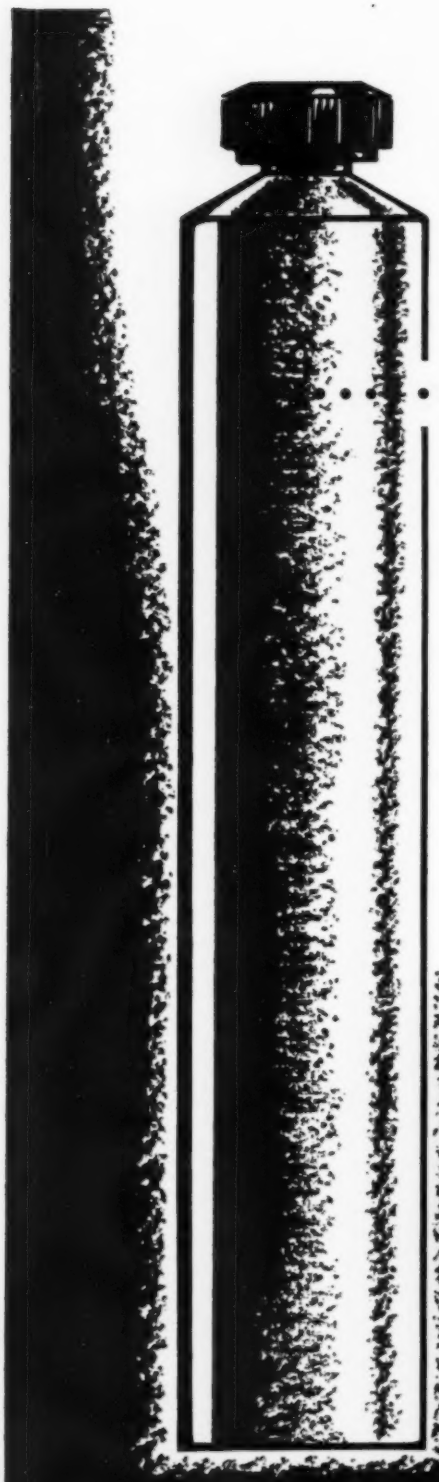
This is a typical example of how Scovill is constantly working with its suppliers to develop new ideas in containers. And Scovill, *oldest supplier in the cosmetic container business*, has all the "know-how" to help *you* with any container problem you have.

Call us any time a problem comes up. We'll be more than glad to sit down and work it out with you.

SCOVILL-MADE Containers

A product of SCOVILL

SCOVILL MFG. COMPANY, WATERBURY 20, CONN.



COLLAPSIBLE TUBES

CAN SPOUTS
SPRINKLER TOPS
APPLICATOR PIPES

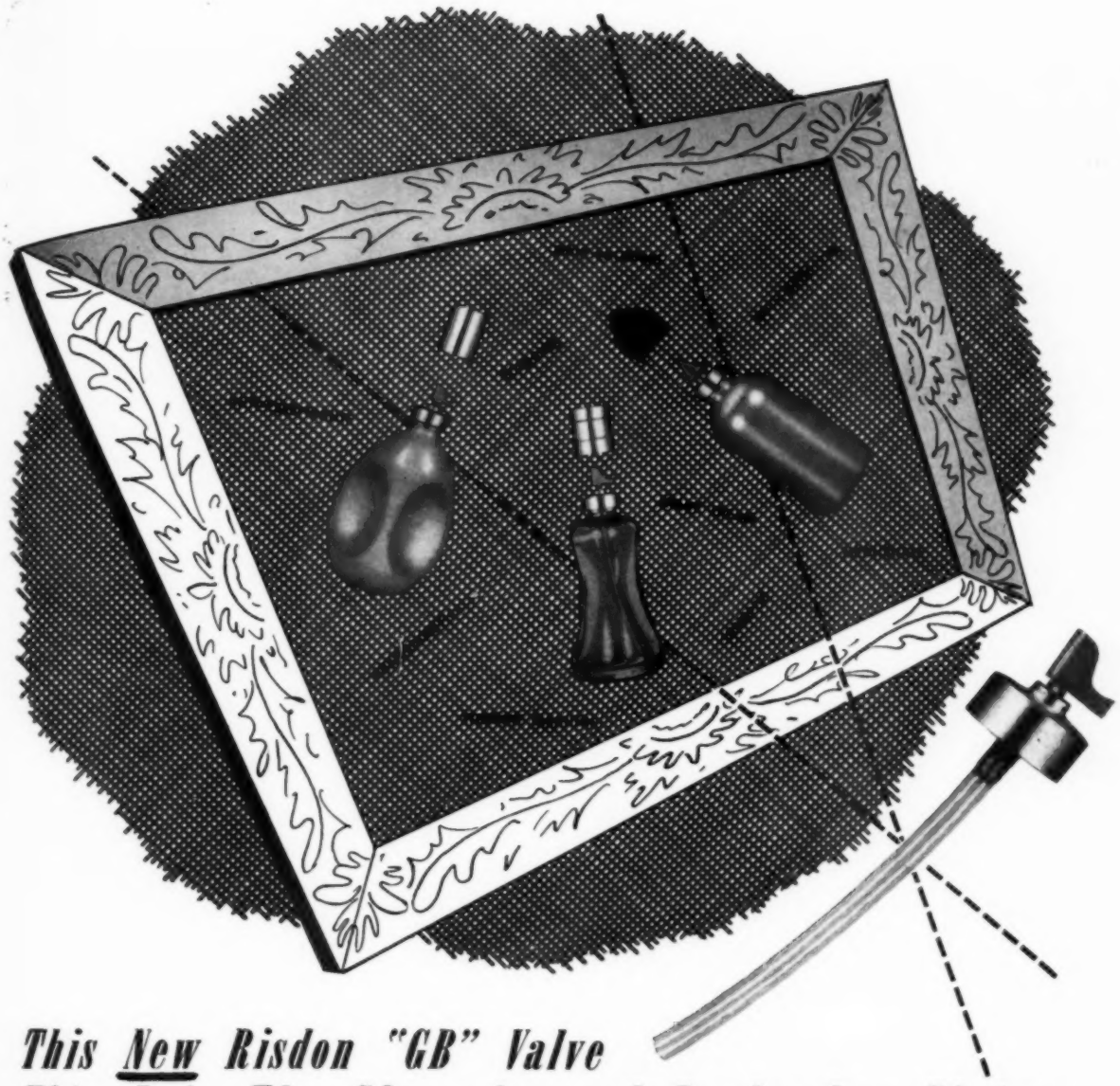
•

PLAIN OR DECORATED
for creams, toothpastes,
ointments, cements, oil colors,
greases, liquids, powders, etc.

ART TUBE CO., INC.

500 LYONS AVE., IRVINGTON 11, N. J.
Telephone . . . . . WAverly 3-6400

· TIN · TINCOATED · LEAD · ALUMINUM ·



This New Risdon "GB" Valve Fits Into The Glass-Aerosol Packaging Picture

No Metal In Contact With Contents...
No Danger of Corrosion Of Valve Components

- In Performance and Appearance The "GB" Valve Is Tailored To Complement Bottle-Packed Spray Products.
- Applicable To Both Coated and Uncoated Bottles.
- Vertical Spray or Horizontal Spray.
- Protective Caps in metal or plastic available in custom-made designs to complement the product package.

Contact Risdon for further details on either the Model "GB" or Model JBR Valve.

THE RISDON MANUFACTURING COMPANY • Valve Division
300 Risdon Street, Naugatuck, Conn.

RISDON'S JBR VALVE—KEY TO NEW AEROSOL POSSIBILITIES—NEW QUALITY PERFORMANCE AND STYLING FOR BOTH METAL AND GLASS CONTAINERS.

Makes possible the use of wider range of propellents. Uses all standard types plus "Freon-21", "Freon-22" and methylene chloride.

Sleek all-metal surface and cap enhance packages with a "quality look."

Produces a soft spray cloud of uniformly minute particles. Modified models can be supplied to give larger particle size, when required. Positive cut off.

Write for free descriptive folder.

RI-34

Merchandising Magic....

...the revolutionary

glass aerosol

Application of the low pressure aerosol principle to glass containers opens an untapped field in modern packaging. Personal products, especially, gain sales appeal and value when offered in spray dispensers. Suntan oil, body deodorants, hair dressings, perfumes, colognes, and many other drug, cosmetic, and chemical items lend themselves to the convenience, cleanliness, economy, and protection push-button containers offer. And now, in glass, aerosol-dispensed products enjoy the added advantages of content visibility plus unlimited range of bottle sizes and shapes... permitting flexible pricing and distinctive packaging in highly competitive trades. Be sure to investigate this new trend. Have your product evaluated for aerosol dispensing possibilities. Contact Continental today.

get the *Extra* advantages of CONTINENTAL SERVICE

✱ **Complete Filling Service.** *We do not merchandise any products of our own. Our sole operation is contract and custom filling of containers with your products... liquid, pressurized or aerosol... in glass or cans.*

✱ **Extensive Laboratory and Production Facilities.** *Continental conducts chemical analysis and continuing research on dispensing methods and containers. Filling equipment is the finest in the industry, geared to handle orders of any size. Quality control and inspection safeguard your shipments.*

✱ **Warehousing and Drop Shipping in Bulk Lots.** *Extensive storage space permits you to use our two centrally-located plants as national distribution points, with consequent large savings on freight costs. We handle shipping and paper work. Your orders are ready when you want them.*

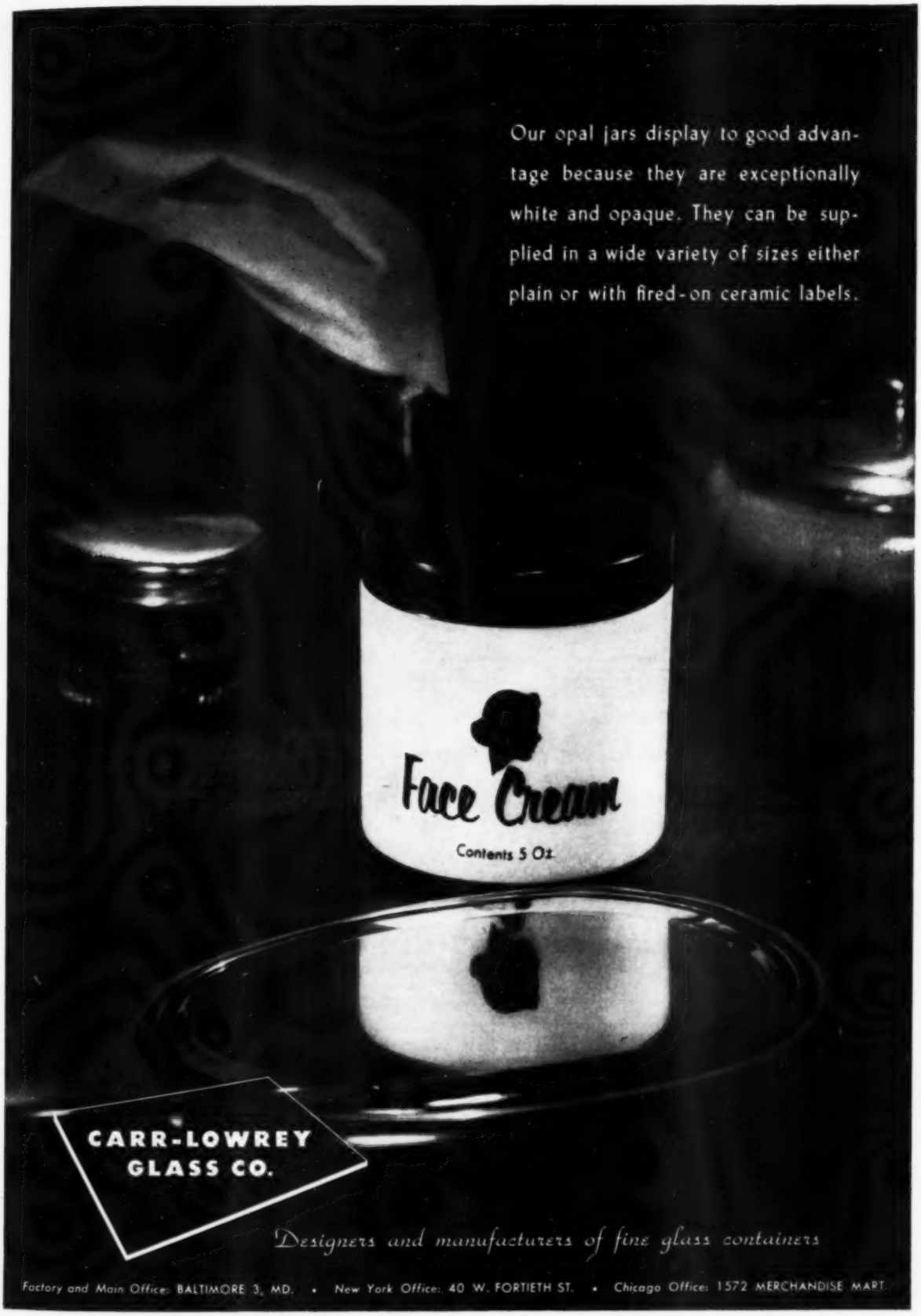
MAIN OFFICE • 123 NORTH HAZEL STREET, DANVILLE, ILLINOIS

CONTINENTAL FILLING CORPORATION

PLANTS • DANVILLE, ILLINOIS — HOBART, INDIANA

CONTRACT AND CUSTOM FILLING

LIQUID SPRAY FOAM


Our opal jars display to good advantage because they are exceptionally white and opaque. They can be supplied in a wide variety of sizes either plain or with fired-on ceramic labels.
Face Cream
Contents 5 Oz.
CARR-LOWREY GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

ATLANTA • DETROIT • NEW YORK • HAVANA • RIO DE JANEIRO • MEXICO, D. F.
Chicago • Melbourne • Burma • Hong Kong • Bogota • San Jose
Ciudad Trujillo • Guayaquil • Guatemala City • Calcutta • Wellington
Managua • Panama • Asuncion • Manila • San Salvador • Montevideo
CANADA: Herman & Leal • 637 Craig Street West • Montreal, Quebec

NEWS...

McKelvy Appointments

Albert J. Elias has been named merchandising director, and Lawrence E. Horner, advertising and sales promotion manager, of the Alfred D. McKelvy Co., according to P. H. Gorman, president and general manager.

Mr. Horner had formerly been export manager of the company, and Mr. Elias, with Lever Brothers.

ALBERT J. ELIAS

40 Yrs. for Polak's Frutal

Polak's Frutal Works, Inc., celebrated its 40th anniversary on August 21 with appropriate ceremonies in Amersfoort, Holland, where the company was founded by Jac Polak and his brother, the late Henri Polak.

Jac Polak, chairman of the board, attended the celebration and was presented with a commemorative plaque by the personnel of the company. Frits J. Polak, who recently succeeded his father as president of the American company, was also present.

From its origin in a small building, Polak's Frutal Works has developed into a world-wide organization with its headquarters established in Middletown, N. Y., and associated companies in Holland, England, Belgium, France and Germany.

Named Nepera Advg. Manager

W. H. Von Rosenstiel has been appointed advertising manager of Nepera Chemical Co., according to Stanley S. Lasdon, executive vice-president. He had previously been with a New York medical advertising agency.

Parrish with Ayerst Labs.

Dr. Louis Parrish has joined Ayerst Laboratories as medical department assistant, according to Dr. John B. Jewell, medical director.

LAWRENCE E. HORNER

Frolich in Chem. Corps. Post

Dr. Per K. Frolich, vie-president of Merck & Co., Inc., has been appointed deputy chief chemical officer for scientific activities and also chief scientist for the Chemical Corps, Department of the Army, according to Major General William M. Creasy, chief chemical officer. Dr. Frolich is expected to assume his new duties about December 1.

He will furnish authoritative advice and counsel to General Creasy and members of his staff in the formulation, planning, review, evaluation and approval of the over-all research and development program of the Chemical Corps.

Heinel Appointed by Atlas

Arthur G. Heinel, formerly in charge of the Atlanta office, Atlas Powder Co., has been appointed technical representative in charge of a new sub-office in Richmond, Va. He has been succeeded in Atlanta by Adrian J. Stewart.

Mr. Heinel will represent the company in Virginia, Washington, D. C., the eastern half of West Virginia and North Carolina.

Schering Promotions

Charles C. Rosen has been promoted to the position of supervisor of the New York district of the eastern division, Schering Corp.; Robert H. Bowles, supervisor of the east central district of the central division; and Ralph J. Hagood, supervisor of the southeastern district, southern division. They will be located, respectively, in New York City, Detroit, and Richmond.

Stevens, V.P., J. T. Baker

Dr. Joseph R. Stevens has been elected to the newly created position of vice-president and operating manager of J. T. Baker Chemical Co., according to Marion W. Smith, president and chief executive officer. Additional appointments include Ralph A. Clark, vice-president in charge of sales; Leslie W. Garner, vice-president and controller; Anthony J. Rarichek, manager of service operations; and Dr. Elmer C. Larsen, vice-president and technical director.

Dr. Larsen was also elected a member of the board of directors to fill the vacancy recently created by the retirement of Russell H. Willever who had been with the company 47 years.

DR. JOSEPH R. STEVENS

Aerosol Dept. for Old Empire

Old Empire Inc. has added a new department, specializing in the formulation of products for aerosol containers. The company states that the research department, under the direction of Dr. Sidney Pollack, can now offer superior formulations for shave creams, shampoos, hand lotions, hair lacquers, toilet waters and alcoholic specialties.

William F. Zimmerman, formerly president of W. F. Zimmerman Inc., and Hans W. Maucher, previously representative of the Naugatuck division of the U. S. Rubber Corp. in New York and New England, have both been named representatives of Old Empire.

Greene Appointed by Monsanto

Raymond A. Greene, formerly resident sales representative in Tuscaloosa, has been appointed sales representative for Monsanto Chemical Co.'s organic chemicals division in the western part of New York State, according to John L. Hammer Jr., division director of marketing.

CROWN SPRA-TAINER: Does It Again!

at her Beauty Salon or in her Boudoir . . .
Provides Lasting Loveliness for her Hair-style

SPRAY AND *STAY*, the magic formula devised by Richard Hudnut and used in Hudnut's Fifth Avenue Salon is a fragrant, non-sticky hair spray containing vacuum-purified lanolin. Conditions milady's hair, gives it lovely sheen and luster . . . controls waves and curls, holds the setting longer. *SPRAY* AND *STAY* is now available for use in the home . . . pressure-packed in SPRA-TAINER, the world's original and leading lightweight propulsion can, made only by CROWN.

SPRA-TAINER's unique "Modern Design" and "No Side Seam-No Top Seam" construction exemplify CROWN's creative ingenuity in the manufacture of fine cans of all types.

CROWN CAN
DIVISION
CROWN CORK & SEAL COMPANY, INC.

One of America's Largest Can Manufacturers PHILADELPHIA • Chicago • Orlando • New York • Baltimore • Boston • St. Louis

Parker, Director of Research

Dr. Robert P. Parker has been appointed to the newly created post of director of research of the Pearl River Laboratories, American Cyanamid Company's research division, according to K. H. Klipstein, division general manager. In addition to directing research at Pearl River, Dr. Parker will also supervise the research programs at the Stamford Laboratories (chemotherapy) and at the Bound Brook (pharmaceutical) laboratories.

He had formerly been director of research at Bound Brook.

DR. ROBERT P. PARKER

Packaging Journal Available

Packing Abstracts, distributed in the United States by the Packaging Institute, and heretofore available only to members of the Institute, is now available to firms, libraries and persons other than Institute members at $35 a year. This has been arranged with the Printing Packaging and Allied Trades Research Association which does the actual abstracting and also publishes the journal in England.

Orders will be accepted by the Packaging Institute, 342 Madison Ave., New York. Single copies are not available.

Each volume comprises 12 monthly issues plus an annual index. The journal covers all the world's literature, journals, books, patents and bulletins that pertain to packaging.

Lascoff Award to Ohmart

Leslie M. Ohmart, of the Massachusetts College of Pharmacy, received the 1954 J. Leon Lascoff Memorial Award during the 13th annual convention of the American College of Apothecaries in Boston. The Award is presented to that pharmacist who has made the greatest contribution toward the advancement of the professional practice of pharmacy.

GCMI Moves to New Address

The Glass Container Manufacturers Institute, Inc., formerly at 8 West 40th Street, has moved to new offices at 99 Park Avenue, New York, according to Victor L. Hall, general manager. Branch offices are also maintained in Washington and San Francisco.

Heads Clinical Research

Dr. B. Marr Lanman has been appointed head of clinical research for Schenley Laboratories, according to R. Blayne McCurry, president.

DR. B. MARR LANMAN

Stone Promoted by Pfizer

George B. Stone, coordinator of new products development, Chas. Pfizer & Co., has been appointed assistant to John E. McKeen, president. He joined the company in 1940 as a chemist in the analytical department.

Stoner Promoted by P-D

Lloyd N. Stoner assistant manager of the Los Angeles branch, Parke, Davis & Co., has been promoted to branch manager, according to Graydon L. Walker, vice-president and director of U. S. and Canadian sales. He succeeds W. J. Roberts who is taking a leave of absence for reasons of health until after January 1. If his health permits, Mr. Roberts will then continue his association with the company in a sales capacity in the Houston area.

Packaging Forum

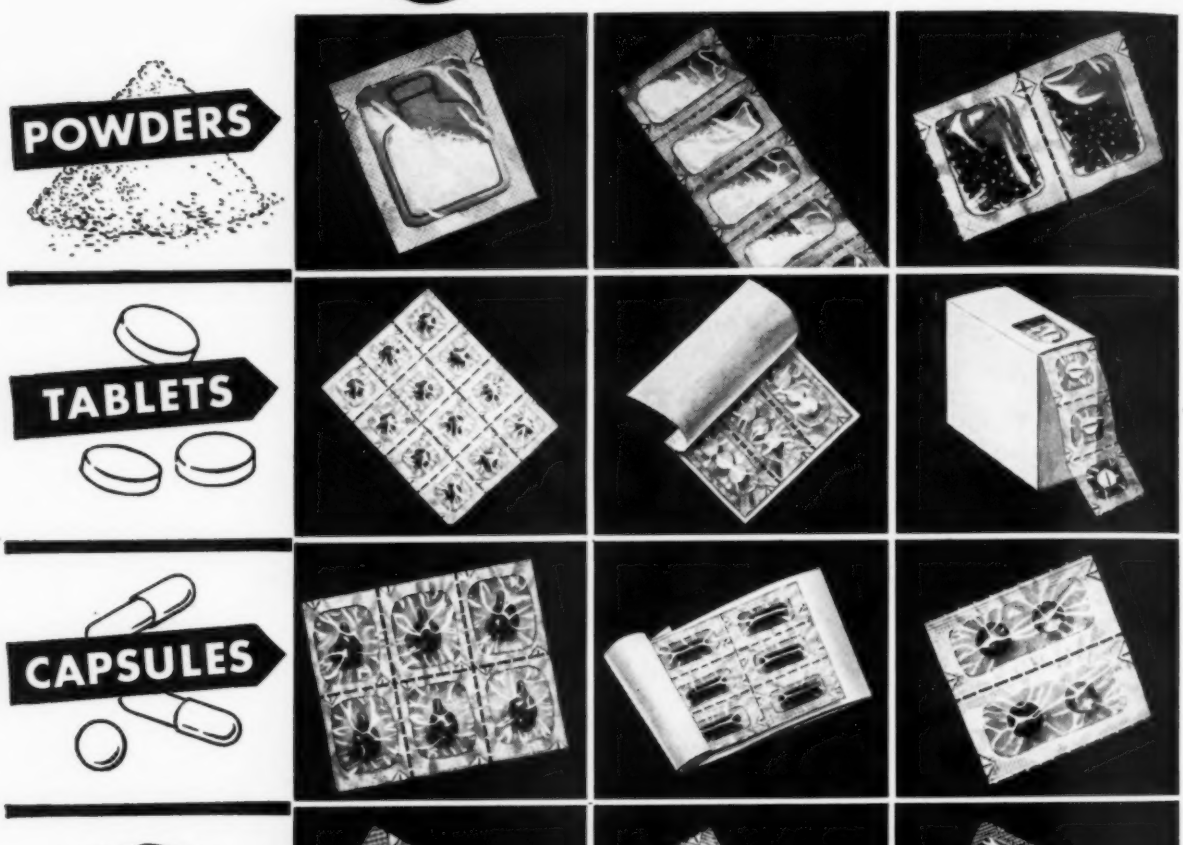
The Packaging Institute's 16th annual forum will be held in the Hotel Roosevelt, New York, October 25 through 27, and will feature as speakers many well-known men in the drug field, including the following: J. C. Bird, Lederle Laboratories; J. Cherepow, Hoffmann-La Roche; L. H. Zahn, Ciba Pharmaceutical Products; O. C. Ferris, Schering Corp.; C. E. Burnside, Eli Lilly & Co.; S. H. Fox, R. P. Scherer Corp.; L. I. Volckening, Ivers-Lee Co.; G. W. Borkland, Borkland Laboratories; Berkeley V. Bennett, National Wholesale Druggists' Association; and C. A. Schokmiller, Grove Labs.

Among the problems these men will discuss are, "Package Development in the Pharmaceutical Field," "Aerosols in the Pharmaceutical Industry," "Reduction of Costs in Pharmaceutical Packaging," "Unit Dosage in Pharmaceutical Packaging," and "Container Printing."

Melvin E. Eaton, left, president of Norwich Pharmacal Co., and George Griffenhagen, associate curator of Smithsonian Institute's division of Medicine and Public Health, examining 19th century pill coater. The first piece of manufacturing equipment used by the Norwich, this device has been donated to the Institute for use in a special exhibit of early American pharmaceutical equipment.

YOUR PRODUCT—PACKAGED AS YOU WANT IT

IN IL SUPER-SEALTITE



In ones or twos or twenties . . . round or square or oval . . . as creams, powders, tablets or capsules—Ivers-Lee packages them all exactly as you want them.

Yet I-L packages all with the exclusive features of I-L Super-Sealtite*—features with which Ivers-Lee alone can provide you . . . the superlative advantages of Feather-Lite Tear and Double Diamond Tear Notches*—complete, absolute protection and positive consumer acceptance.

UNIT-PACKAGING HAS BEEN OUR BUSINESS FOR OVER 34 YEARS

IVERS UNIT PACKAGING LEE CO.
215 CENTRAL AVENUE NEWARK, NEW JERSEY

*Pats. and Pats. Pending

On Warner-Hudnut Board

James S. Adams, general partner, Lazard Freres & Co.; Henry H. Hoyt, president, Carter Products, Inc.; and Nate S. Shapero, president, Cunningham Drug Stores, Inc., have been elected directors of Warner-Hudnut, Inc., according to Elmer H. Bobst, chairman of the board.

Ferdinand Eberstadt, president of F. Eberstadt & Co., Inc., and the three new directors, represent International Drug Products, Inc., which was organized by F. Eberstadt & Co., and Lazard Freres & Co. International Drug subsequently purchased 558,411 shares, representing 44.5 per cent of the common stock of Warner-Hudnut, from the executors of the estate of Gustavus A. Pfeiffer.

Nat. Distillers Moves

National Distillers Products Corp. last month moved its executive offices from 120 Broadway to the new aluminum-clad National Distillers Building at 99 Park Ave. The entire move, involving 36 departments and more than 700 people, took three weeks to complete.

National's New York organization, comprising executives, supervisory personnel and specialized departments of both the liquor and chemical branches of the business, occupies six floors, the 9th to the 14th.

Cutter Appointments

William O'Neill has been appointed human drug products sales manager of Cutter Laboratories, and Robert Ulsh, hospital products sales manager, according to Harry Lange, vice-president in charge of sales and advertising. Mr. O'Neill and Mr. Ulsh both take over from C. M. Wilcox who resigned to become executive vice - president of Fillauer Surgical Supplies, Inc.

William Volk, Coty sales representative (eastern seaboard division), being congratulated by Philip Cortney, president, at a dinner in Gold Suite, Savoy Plaza Hotel, during recent Coty sales meeting. Mr. Volk received a gold medal and scroll in honor of his 25 years with the company.

Hazel Bishop Suit

Hazel Bishop, Inc. has filed a $3 million damage suit against the Gillette Co., charging that the firm pirated its trade secrets and made use of them in the introduction of the new Toni "Viv" lipstick. Hazel Bishop is also seeking an injunction barring the sale of Viv.

The complaint, which was filed in the U. S. District Court for the Southern District of New York, alleges that Gillette obtained these trade secrets while carrying on negotiations for the purchase of Hazel Bishop. These negotiations were begun in 1952, resumed in the Spring of 1954, and finally terminated by both companies.

J. P. Spang, Gillette president, last month declared that his company denies all of the charges made in the complaint.

Proprietary Ass'n Chairmen

Committee Assignments of the Proprietary Association for the ensuing year have been made, according to Stanley I. Clark, president. The following men have been named chairmen: President's committee, Mr. Clark, Sterling Drug, Inc.; Finance, Walter R. Beardsley, Miles Laboratories, Inc.; requirements, F. Jackson, Emerson Drug Co.; membership, George Hyde, Mentholatum Co.; National relations, Z. O. Moore, Chattanooga Medicine Co.; transportation, George O. Griffith, American Home Products Corp.; foreign trade, Victor Folsom, Sterling Drug; public relations, Kenneth Bonham, American Home Products; scientific section, Dr. Mark Tapley, Sterling Drug; and planning, John A. Cawley, Miles Laboratories.

New Power Plant for Gair

Robert Gair Co., Inc. has installed additional power equipment at the Haverhill, Mass., boxboards division. The new boiler house, costing $1.2 million makes the plant wholly self-supplying. The huge water softener and de-aerator, 44 feet tall, is capable of handling 200,000 pounds of water an hour in the de-aerator and 76,000 pounds per hour in the water softener.

The new plant makes available to the New England board markets an increased tonnage of better quality and wider variety of grades of boxboard from the plant.

WILLIAM O'NEILL

ROBERT ULSH

FRITZ J. HOPF

STANLEY T. OLDS

Roche Vitamin Div. Changes

Fritz J. Hopf and Stanley T. Olds have joined the Hoffmann-La Roche bulk vitamin division as field representatives in the Philadelphia and Chicago areas, respectively, according to Paul J. Cardinal, vice-president. Mr. Hopf has been associated with Hoffmann-La Roche since 1941; Mr. Olds had formerly been with Magnus, Mabee & Reynard, Inc.

Ammersbach in 25-Year Club

George H. Ammersbach, chief perfumer of Fritzsche Brothers' perfume division, became the 63rd member of the company's Quarter-of-a-Century Club on August 26. He has specialized in creative perfuming throughout most of his association with the firm and has done much distinguished work in that division.

His anniversary was celebrated with a luncheon at Charles Restaurant, attended by President John H. Montgomery, Vice - presidents Ernest Guenther and Frederick H. Leonhardt, Jr., and Mary Neary, secretary to the chairman of the board, Mr. Leonhardt, Sr., who was out of town and could not be present at the celebration.

Lederle Helicopter Service

Lederle Laboratories division, American Cyanamid Co. last month inaugurated a regular helicopter service as part of its distribution system. The first flight of the unique service, operated by New York Airways, Inc., and authorized by the Civil Aeronautics Board and the Post Office Department, took place on August 9. The Sikorsky helicopter landed at the special heliport on Lederle's 600-acre plant at Pearl River, N. Y., and departed minutes later with a consignment of air mail. There are two flights a day.

Abbott Expansion

Abbott Laboratories has bought the American Can Company plant at 14th St. and Sheridan Road in North Chicago, according to a joint announcement. The Can Company and Abbott properties adjoin each other at 14th St.

The Can Company property, which consists of four buildings on approximately 13½ acres, will be available to Abbott as soon as the American Can Company vacates the premises—expected to be some time in 1955.

Bugbee Receives Award

George Bugbee, president of the Health Information Foundation, has been selected as the 1954 recipient of the American Hospital Association's highest honor, the Award of Merit, according to Ritz E. Heerman, Association president. He was executive director of the American Hospital Association from 1943 until May 1, 1954, when he assumed the presidency of HIF, succeeding the late Admiral W. H. P. Blandy.

Aerosol Competition Entries

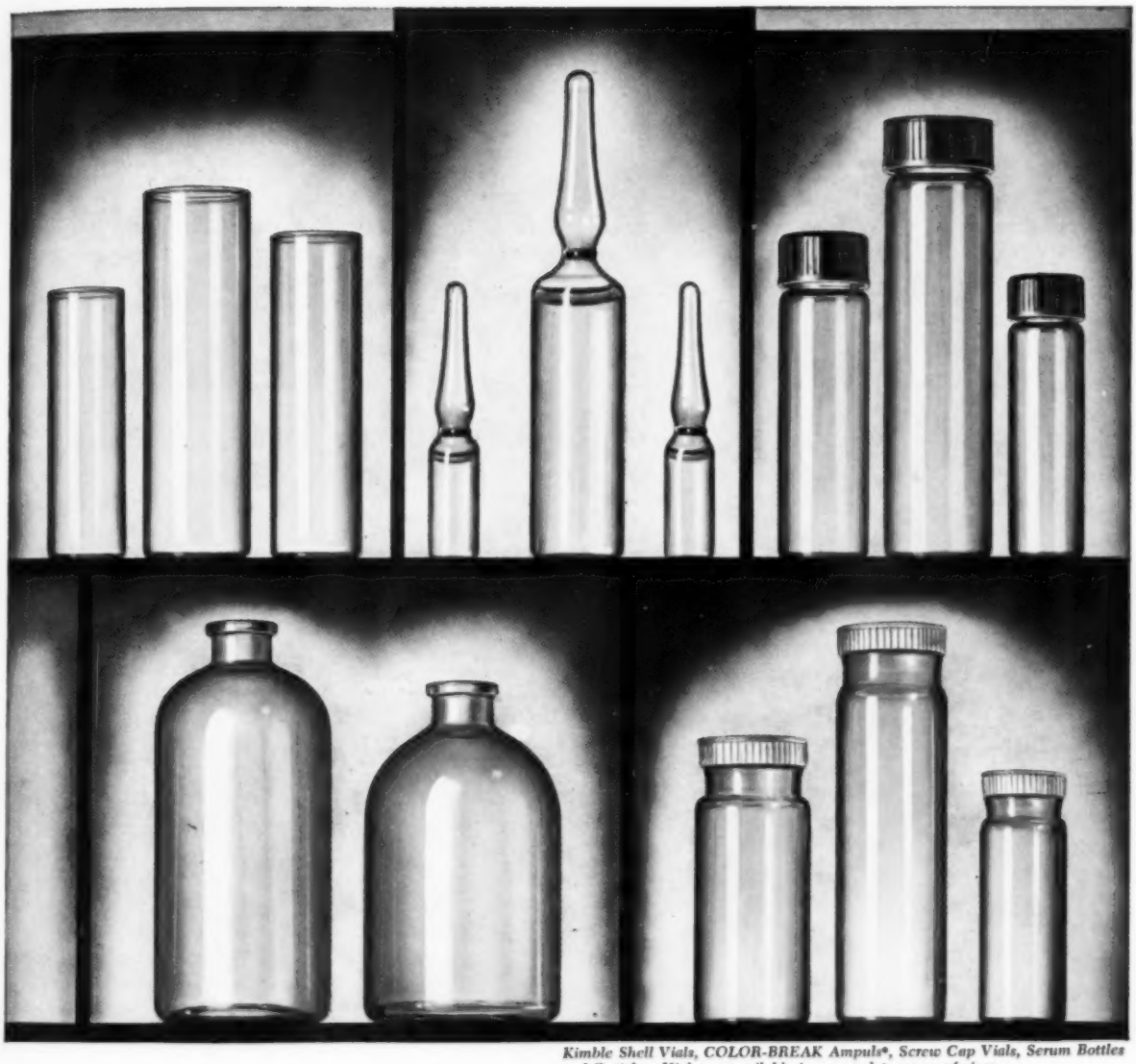
Entries in the 1954 aerosol package competition will close October 15, according to Fred Lodes, Precision Valve Corp., and chairman of the Festival Committee. This competition will be held as part of the third annual Aerosol Festival in conjunction with the 41st annual meeting of the Chemical Specialties Manufacturers Association in New York in December.

The entries must be filled out on forms obtainable from the CSMA office, 110 East 42nd St., New York 17, and returned to that office with a sample of the aerosol package on or before the October 15 deadline.

This competition is open to all comers and is not restricted to members of CSMA. There are no fees or other charges. The entry must be made by the brand owner and is restricted to one package in any single classification. In addition to the selection of a winning package in each of ten classes, a "best aerosol in the show" will also be selected.

Entries in the competition will be classified in the following manner: (1) Insecticides, repellents and moth proofers; (2) Room deodorants; (3) Pains, enamels, other protective coatings and paint remover; (4) Other household products (polishes, rug shampoo, glass cleaner); (5) Shave products; (6) Hair preparations; (7) Other personal products (shampoos, body deodorants, sun tan oils, drugs); (8) Snow, all types; (9) Industrial products (lubricants, stencil inks, belt dressings) and (10) Glass and plastic aerosols, all products.

A. J. Edgar (left), traffic manager, and T. Floyd-Jones (right), manager of markets, Lederle Laboratories, welcoming New York Airways pilot, Howard Higgins, on inaugural flight of newly instituted helicopter service between La Guardia Field and Pearl River, N. Y., Lederle plant, with intervening stops in New York Metropolitan area.



Kimble Shell Vials, COLOR-BREAK Ampuls, Screw Cap Vials, Serum Bottles and Opticlear Vials are available in a complete range of sizes.*

KIMBLE SPECIALIZES

in difficult packaging problems

Sensitive serums, vital drugs; antibiotics, perfumes; cosmetics; or moisture-proof glass houses for good cigars...what's your packaging problem?

For 53 years Kimble has specialized in difficult packaging problems. From Kimble research has come Neutraglas—a special Kimble borosilicate glass that is the most resistant workable glass known. From Kimble research has come specialized glass packages that have helped make merchandising successes for a variety of pharmaceutical and proprietary products, fancy food items, spices and advertising novelties.

Can the greatest knowledge-in-glass packaging available anywhere help give your product the competitive edge? Find out by writing Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

**COLOR-BREAK is a trade mark of the Kimble Glass Company, subsidiary of Owens-Illinois*

KIMBLE GLASSWARE
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

SHEFFIELD TUBES

choice of CHAS. PFIZER & CO., INC.

In the treatment and control of many afflictions of the eye, one of the most complex and valuable structures of the body, physicians find Pfizer's Cortril Ophthalmic Ointment (brand of hydrocortisone acetate) highly effective. To guard the purity and efficacy of Cortril, Pfizer relies on Sheffield Tubes. Other widely used Pfizer products packaged in functional *Sheffield Process Tubes* include Terramycin® Ointment with Polymyxin B Sulfate, Terramycin Ophthalmic Ointment with Polymyxin B Sulfate, Cortril Topical Ointment, Polymyxin B Sulfate Ointments and Bacitracin Ointments.

At Sheffield, tube quality and uniformity are closely controlled by exacting specifications, inspection and research designed to better protect important ethical products. For value and service that exceeds your expectations, try Sheffield Tubes on *your* next order.

THE SHEFFIELD TUBE CORPORATION

Factory and Home Office: New London, Connecticut • Sales Offices: New York—Chicago—Los Angeles

Foragers Make Plans

The Board of Governors of the Foragers of America met on September 1st and discussed plans for the coming months. A Hallowe'en party with a buffet supper will be held on the evening of October 27 at the Midston House club rooms in New York. On December 15, the annual membership meeting and buffet supper will take place, also at the club rooms.

The annual banquet (1955) is scheduled for January 14 at the New York Advertising Club.

Cook Named Hon. President

Dr. E. Fullerton Cook has been elected honorary president of the American Pharmaceutical Association for the coming year. He has been an important figure in American pharmacy over a period of five decades. He has served on the faculty of the Philadelphia College of Pharmacy and Science as Professor of Operative Pharmacy and director of the pharmaceutical laboratories since 1900; he now holds the rank of Professor Emeritus. He served as chairman of the Committee on Revision of the United States Pharmacopoeia for nearly 10 years.

Hoffman on Business Trip

Dr. William A. Hoffman, president of William A. Hoffman, Inc., is in Europe this month on a business trip and will confer with the executive officers of the various companies he represents. He is traveling through France, Austria, West Germany and England.

Claus with R. A. Jones

Carl A. Claus has been appointed manager of eastern sales for R. A. Jones & Co., Inc., and will be aided by Allen Suydam and George Hussey who have been with the company for several years.

The firm has established offices at 382 Springfield Ave., Summit, N. J.

CARL A. CLAUS

Vincent A. Burgher (second from left), vice-president in charge of sales, CIBA Pharmaceutical products, Inc., discussing company sales policy at recent meeting of seven newly promoted district managers and members of home office executive staff. Seated, left to right: Charles E. Munson, sales training director; Mr. Burgher (standing); Dr. Hubert Meyer, visiting executive from CIBA, Basle, Switzerland; Frank H. Pratt, sales manager; Edgar G. Barton, Jr., district manager, Jacksonville, Fla.; Archie Armstrong, D.M., Atlanta; Birney R. Smith, D.M., Seattle; F. William Zelewski, D.M., Denver; and H. W. Hackett, D.M., Boston. Standing, left to right: Felton Davis, Jr., Assistant sales training director; George H. Bull, D.M., Washington, D. C.; Sidney J. Jackson, assistant sales promotion manager; Howard M. Bilden, sales promotion manager; and Clayton F. LeVeque, D.M., Minneapolis.

FDA Amends Antibiotic Rules

The Food and Drug Administration has amended its regulations covering antibiotic drugs and preparations in several respects. The amendments relate to tests and methods of assay for powder bacitracin methylene disalicylate and streptomycin sulfate oral veterinary, and to certification of procaine penicillin-streptomycin-neomycin in oil, dihydrostreptomycin-streptomycin sulfates solution and chlortetracycline ointment.

Miller Promoted by Hooker

Harris C. Miller has been promoted from assistant New York district sales manager to sales manager of Hooker Electrochemical Co.

Roerig Appointments

A. Jack Russo has been appointed executive assistant to Administrative Vice-president Herbert P. Nack, J. B. Roerig & Co., according to Thomas J. Winn, president. Wesley Lang has been named treasurer, and John Hoegh, controller.

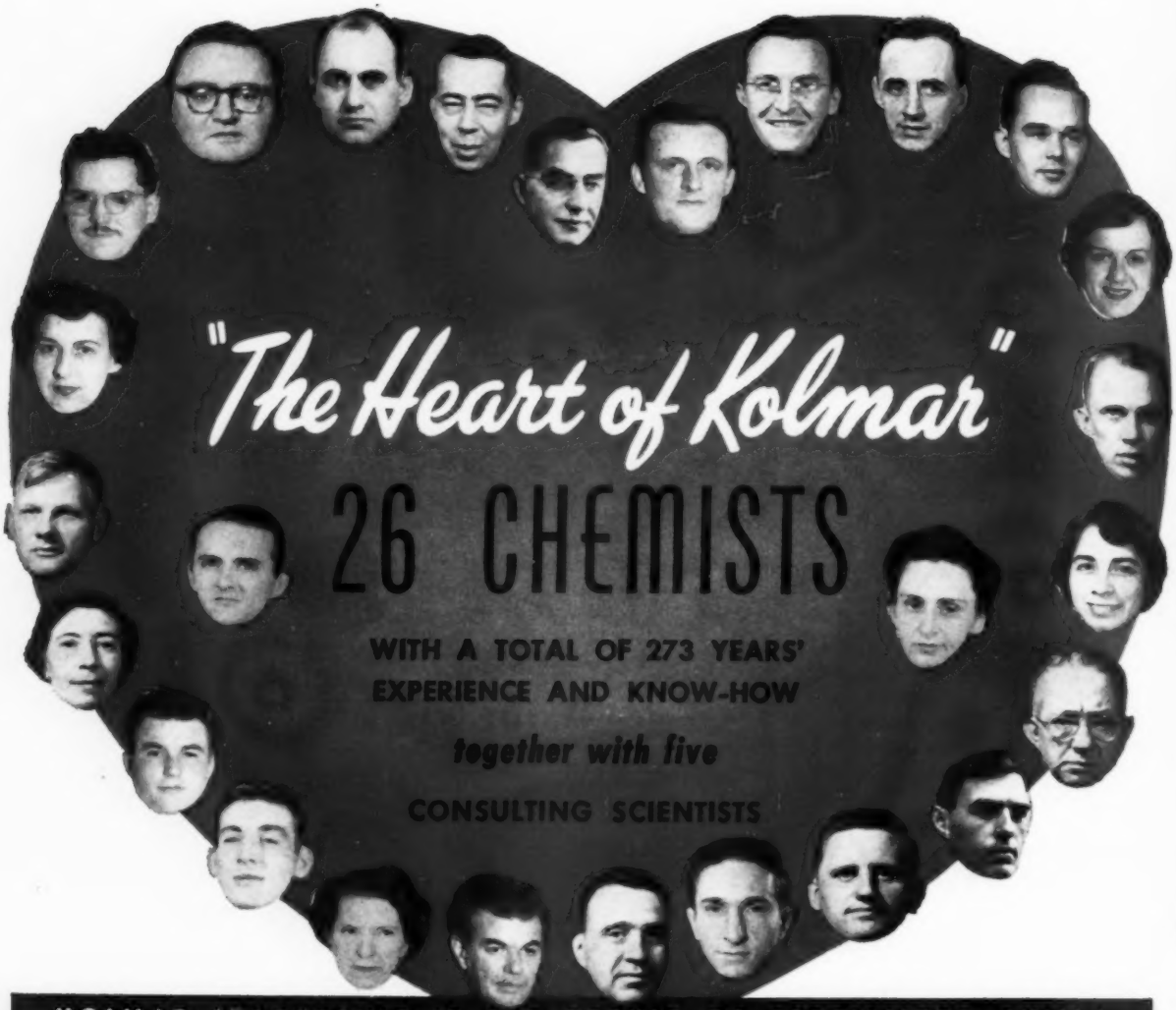
A. JACK RUSSO

Citric Process Suit

Ferment - Acid Corporation, New York, owner of the Szucs process for manufacture of citric acid by deep fermentation, filed an action against Chas. Pfizer & Co., Brooklyn, N. Y., in the U. S. District Court on August 23. The complaint alleges wrongful use by Pfizer of the Szucs process and improper use of confidential information disclosed by Dr. Szucs to Pfizer during the period that Pfizer investigated the Szucs process under a so-called "look-see" contract. Ferment-Acid Corporation asks for an injunction restraining Pfizer from utilizing such information, treble damages for patent infringement, and $5,000,000 damages for the unlawful use of the principles, techniques and other information acquired from Dr. Szucs.

Kenneth B. Ray, New York, attorney for Ferment-Acid Corporation, says that Dr. Joseph Szucs is a fermentation chemist of world renown. He was the first chemist to discover and develop a commercial process, known as the pan method, for the product of citric acid, says Ray. Since 1924 this original process has been widely used, he adds.

Mr. Ray further states that Dr. Szucs came to this country in 1942 and opened a laboratory for research at the Boyce Thompson Institute. Contrary to all of the then prevailing opinion, says Mr. Ray, Dr. Szucs in 1943 developed a process for the manufacture of citric acid by what he calls "deep fermentation." He was awarded a patent by the U. S. Patent Office under date of July 18, 1944 which is recognized as the basic patent in this field, says Mr. Ray, who adds that many foreign countries likewise have issued a patent on the same subject matter to Dr. Szucs.


"The Heart of Kolmar"
26 CHEMISTS
WITH A TOTAL OF 273 YEARS' EXPERIENCE AND KNOW-HOW
together with five
CONSULTING SCIENTISTS

KOLMAR LEADERSHIP IS THE RESULT OF SPECIALIZED SKILL!

♥ The "Heart of Kolmar" provides continuous creative research and thorough testing at every step of the manufacturing process . . .

♥ It provides the control of quality from raw material to finished product . . .

♥ It has given Kolmar product superiority and uniformity, combined with favorable price . . .

♥ It has enabled Kolmar to develop many of the best known products in the cosmetic field . . .

♥ It constantly works for the improvement of existing methods and formulae, and the development of new ones.

♥ It has won Kolmar recognition *as America's Leader in Private Label Cosmetics.*

The customer's rights in the formula under which he operates is always respected by Kolmar. Consultation will not obligate you and there's a Kolmar Laboratory or Representative near to give you prompt service at all times.

•

Kolmar Products include Lipstick, Dry and Cream Rouge, Loose Face Powder, Cake Make-Up, Compact Powder, Foundation Creams, Liquid Make-Up, Eye Shadow, Mascara, Lotions, Colognes, Perfumes and other cosmetics.

•

REPRESENTATIVES: DOUGLAS HAGGERTY; THOMAS LA PRELLE, EASTERN SALES MANAGER, EMPIRE STATE BLDG., ROOM 605, NEW YORK, N Y.; WARREN M. CURRY, 599 PLUM ST., N. W., ATLANTA, GA.; NORMAN L. KOLE, 505 NORTH LA SALLE ST., CHICAGO, ILL.; J. C. WEILER, 8003 FORSYTHE BLVD., ST. LOUIS 5, MO.; R. F. G. BYINGTON, 1260 N. WESTERN AVENUE, LOS ANGELES, CALIF.; RICHARD F. SPICKER, 419 W. FIFTH ST., CINCINNATI, OHIO; ELMER J. SCHWARTZ, 10016 EAST 35TH TERRACE, KANSAS CITY 3, MO.

Kolmar LABORATORIES

MILWAUKEE 2, WISCONSIN

PRIVATE LABEL COSMETICS EXCLUSIVELY

KOLMAR COSMETIC SPECIALTIES, INC. (complete package division) • KOLMAR INTERNATIONAL, INC. • WICKHEN PRODUCTS, INC.

PLANTS IN PORT JERVIS, NEW YORK; TWO PLANTS IN MILWAUKEE, WIS., AND ONE IN HOLLYWOOD, CALIF.
CANADA: KOLMAR WILCKENS, LTD., PLANT IN BARRIE, ONTARIO; OFFICE: 205 YONGE ST., TORONTO, ONT.
AUSTRALIA: KOLMAR (AUST.) PTY. LIMITED, 494 KENT ST., SYDNEY; KOLMAR EUROPE: PARIS, FRANCE

Furlager Completes Move

Furlager Manufacturing Co. and Paris Cosmetics have completed their move into new quarters at Roosevelt Ave. and 99th St., Corona 68, Long Island, thereby doubling their space. The manufacturing phase consists of a one-storey operation located on the first floor. On the second floor are the offices, laboratories and private dining facilities for officers and employees.

Adequate loading and unloading space is provided off the street, as well as a 15,000-sq. ft. parking area.

Officers of the company include L. I. Furlager, president; Arthur Alter, vice-president in charge of promotion and sales, and also executive assistant to Mr. Furlager; M. Daniels, new technical director; and Miss Lee Goldstein, secretary and treasurer. Mr. Alter is one of the top designer and merchandising men in the country.

Architect's drawing of new quarters for Furlager Manufacturing Co. and Paris Cosmetics Inc. which have provided double the space of the previous location. The manufacturing operations are limited to one story and are located on the ground floor, with offices, laboratories and dining facilities on the second floor.

Taylor Named Society Treas.

Dr. Walter Allen Taylor, research and control manager of Pond's Extract Co., has been appointed treasurer of the Society of Cosmetic Chemists, according to Dr. Donald H. Powers, Society president.

Flint Appointed by Cutter

Bill Flint has been appointed resident manager of contract sales of Cutter Laboratories, according to Harry Lange, vice-president in charge of sales and advertising. He will be located in the company's New York district office.

He has succeeded Bob Ulsh who has become hospital products sales manager of the company's Berkeley headquarters replacing C. M. Wilcox. Mr. Wilcox, in turn, has left Cutter to become executive vice-president of Fillauer Surgical Supplies, Inc.

Mr. Flint has been with the Cutter sales department since 1936.

BILL FLINT

Colgate Isotope Laboratory

Colgate-Palmolive Co. has established a new radioisotopes laboratory for basic research in soaps, detergents and toilet articles. The installation, located in New Brunswick, N. J., uses isotopes as tracers in laboratory tests to determine how various ingredients work. The information obtained will eventually be used to develop improved formulas and more efficient manufacturing processes.

Dr. Manno F. Nelson, who has carried out isotope research at the University of Iowa, will head the laboratory.

Newell in Schenley Exec. Post

Thomas W. Newell has been appointed assistant to R. Blayne McCurry, president of Schenley Laboratories, Inc. He had formerly been manager of special medicinal products in the commercial development division of Merck & Co., Inc.

THOMAS W. NEWELL

Set Up Penick Fellowships

The American Foundation for Pharmaceutical Education, Washington, D. C., has set up two fellowships in honor of the late Sydnor Barksdale Penick founder of S. B. Penick & Co.

Two graduate fellowships will be offered each year to students outstanding in medical, pharmaceutical and chemical sciences.

APMA Program Chairmen

Robert A. Hardt, president of the American Pharmaceutical Manufacturers' Association, has announced the program chairmen for the combined mid-year and Eastern section meeting of the APMA. This meeting will be held in the Waldorf-Astoria Hotel, New York, on December 6, 7 and 8.

Francis C. Brown, president of Schering Corp. and eastern vice-president of the APMA, is general chairman of the combined meeting. Collaborating with Mr. Brown are: Dr. John C. Bird, Lederle Laboratories, chairman, social and economic developments committee; Dr. John Blagg, Chas. Pfizer & Co., chairman, production section; Dr. J. B. Jewell, Ayerst Laboratories, chairman, medical section; Thomas P. Lewis, Walker Laboratories, chairman, export section; Henry McNeil, McNeil Laboratories, chairman, marketing section; Dr. Elmer L. Sevringhaus, Hoffmann-La Roche Inc., chairman, scientific award board; Frederic N. Schwartz, Bristol Laboratories, chairman, Industry and Business Policy Committee; and Dr. Maurice L. Tainter, Sterling-Winthrop Research Institute, chairman, scientific section.

try these amazing, stable

FELCOFIX*

powdered flavors

IDEAL LONG-LIFE FLAVORS FOR

- Baked Goods
- Confections
- Desserts
- Dough and Flour Mixes
- Gelatin
- Ice Cream Powders
- Icings
- Medicines
- Pharmaceuticals
- Powders and Dry Mixes
- Puddings
- Soft Drink Powders
- Spice Mixes
- Tablets
- Vitamins
- Wafers

Felton's complete line of FELCOFIX powdered flavors offers you the best answer to the problem of permanently flavoring all kinds of dry, semi-dry or powdered products... completely eliminating that old shelf-life bugaboo!

These outstanding flavors are supplied as dry, perfectly homogeneous powders that remain fresh, true and delicious even when used in mixtures containing acids, sugars and other reactive ingredients.

Their concentration and lasting power are equally amazing, and result in economies that are important to your profits.

It will pay you to try our FELCOFIX flavors without delay!

Write now for Samples of these amazing new **FELCOFIX*** locked-in **FLAVORS**

FLAVORS • ESSENTIAL OILS • AROMATICS

FELTON CHEMICAL COMPANY, INC.
599 Johnson Ave., Brooklyn 37, N. Y.

PLANTS: Brooklyn, N. Y. • Los Angeles, Cal. • Montreal, Que. • Versailles (S & O) France

SALES OFFICES: Atlanta • Boston • Chicago • Cleveland Philadelphia • St. Louis • Toronto

*FELCOFIX is a trade mark of Felton Chemical Co., Inc.

Buys McKay Package Machinery Business

The Roto Wrap Machine Corp., a new subsidiary of Roto Bag Machine Corp., has acquired the packaging machinery business of the McKay-Davis Chemical Corp. The new firm will market a line of automatic packaging machines for tablets, liquids, powders and larger solid objects in the food, pharmaceutical, hardware and textile fields.

Roto Wrap has purchased a new plant to house this operation at Englewood, N. J.

William Thompson, formerly chief engineer at Transparent Wrap Machine Co., will supervise the production program. Sales will be handled through the Roto Wrap division, Conapac Machine Co., 120 East 13th St., New York.

WILLIAM THOMPSON

John E. Donahue

John E. Donahue, secretary of the National Pharmaceutical Council, died August 19 in the Jefferson Hospital, Philadelphia. He became associated with the newly-organized Council on June 15, 1954 and assumed the post of secretary at the annual meeting of the board of directors at Lake Placid on July 1.

He is survived by his wife, Mary E. Donahue; and three children, Hugh, Elinor and James.

Guy Sinclair Dunbar

Guy Sinclair Dunbar, retired president of the Burroughs-Wellcome Co., died August 7 in Doctors Hospital, New York, after a brief illness. He was 66 years old. He graduated in 1909 from the Philadelphia College of Pharmacy, and after two years as assistant manager of a New York drug company, he opened a retail drug store. Mr. Dunbar later sold the store and joined Burroughs-Wellcome. He subsequently became sales manager and then president, which post he held for several years until his retirement in 1948.

He is survived by his widow, Mrs. Edna M. Plewzinske Dunbar; a brother, W. Foster; and a sister, Mrs. Charles G. Ferris.

George M. Gales

George M. Gales, retired president of the Liggett Drug Co., died August 15 at his home in Locust Valley, L. I., after a long illness. He was 78 years old. He became a strenographer for the American Tobacco Co. at the age of 20 and was later named head of the National Cigar Stand Co., which was then a new subsidiary of the United Drug Co. This company is now the Rexall Drug Co.

Mr. Gales was elected president of the Liggett company in 1914 and first vice-president of the United Drug Company in 1921, as well as joint managing director of the Boots Pure Drug Co. of England. He also became president of Drug, Inc., a holding company for several large manufacturing organizations and was a founder and president of the National Association of Chain Stores.

Surviving are his widow, Mrs. Helene Seymour Gales; a son, Seaton Gales; a daughter, Mrs. Francis H. Hoge; and five grandchildren.

Adolph Gottscho

Adolph Gottscho, founder and board chairman of Adolph Gottscho, Inc., died August 23 of a heart attack while vacationing at the home of his son, Alfred, in Lancaster, Pa. He was 76 years old. Mr. Gottscho participated until his death in the affairs of the company which he established in 1903.

Surviving are three sons, Ira, president of the Gottscho company, Alfred and Leo; and a daughter, Mrs. Milton Frank.

Ernest R. Jones

Ernest R. Jones, 64, assistant director of products development for Parke, Davis & Co., died suddenly on July 31 at Lexington, Ky., while returning from a vacation in Florida. He had been building a home at Delray Beach, Fla., in anticipation of retiring in October.

Surviving are his wid ; a son, Richard E. Jones; and o daughters, Mrs. Barbara M. Ruprecht and Cheryl Jones.

Edwin C. Kenton

Edwin C. Kenton, vice-president of Evans Research and Development Corp., died August 19 while on a business trip in Chicago. A former president of the New York chapter of the Armed Forces Chemical Association, Mr. Kenton acted as liaison between Evans Research and all government agencies.

Surviving are his wife, Mrs. Cecile Kenton; two daughters, Mrs. Chester Morris and Mrs. Malcolm Ward; a sister, Mrs. Jerome Lustig; and two grandchildren.

William Douglas McAdams

William Douglas McAdams, chairman of the board of William Douglas McAdams, Inc., an advertising agency specializing in pharmaceutical accounts, died August 14 in his home at Winnetka, Ill. He was 68 years old.

Mr. McAdams formed the agency in 1925 in Chicago and moved the firm to New York four years later.

He is survived by his wife, Marguerite Bowman; three daughters, Joan Adele McAdams, Mrs. Marilyn Barton, and Mrs. Marguerite Booregaard; a son, William D. McAdams, Jr.; four grand children; and three sisters.

Frits J. Polak

Frits J. Polak, president of Polak's Frutal Works, 39, was among those killed in the KLM Royal Dutch Airlines plane which crashed September 5 at the mouth of the River Shannon in Ireland. He was returning from the 40th anniversary of the company.

Mr. Polak, who came to this country just prior to World War II, volunteered for service as a private in the U. S. Army. During his four years of service in the Intelligence Department, he rose to the rank of Captain.

He is survived by a wife and two children.

Robert T. Vanderbilt

Robert T. Vanderbilt, 69, founder and president of the Vanderbilt Chemical Corp., 230 Park Ave., New York, and a number of subsidiaries, died August 13, in Bellevue Hospital, of injuries sustained the previous afternoon when he was struck by an automobile truck at Lexington Ave. and 43rd St.

He founded the chemical firm in 1916 and had been its president since that time.

Surviving are three sons, Frederick B. Vanderbilt, Robert T. Vanderbilt, Jr., and Hugh B. Vanderbilt; and a sister, Mrs. Olive Hodgson.

LOOK at the sales advantages offered your product by G-11®

(Brand of Hexachlorophene)

The market for products containing G-11 is an established, growing market with virtually unlimited opportunities for profitable development.

Few products have ever been studied so exhaustively and given such unanimous acclaim by authorities. G-11 is recognized as the proven, effective and non-irritating antiseptic chemical that offers outstanding hygienic and deodorizing advantages.

Years of safe, successful use by millions of people assure the continued success of your products containing G-11.

As the originator and producer of G-11, Sindar offers you the benefits of its scientific knowledge, practical marketing experience and technical service in using it to the best advantage in your soaps, detergents and cosmetics.

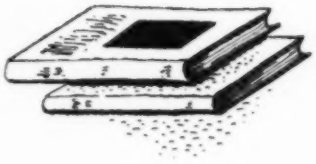
Bulletins are available on:

- **Physical and Chemical Properties**
- **Toxicological Properties**
- **Bacteriological Properties**
- **Cosmetic Use**
- **Soap and Detergent Use**
- **Literary Abstracts**

SINDAR® Corporation
Industrial Aromatics and Chemicals

330 West 42nd Street • New York 36, N. Y.

Branches: **Philadelphia • Boston • Cincinnati Detroit • Chicago • Seattle • Los Angeles • Toronto**



Trade Literature

Booklet on Rhodinol

Shulton, Inc. Fine Chemical Division, 630 Fifth Avenue, New York 20, has issued Technical Bulletin No. 103 on Rhodinol Shulton which is described as "a consistent and uniform source of true rhodinol which is independent of geranium oil and its wide price fluctuations."

Folding Paper Boxes

Edwin J. Schoettle Company, 533 N. Eleventh Street, Philadelphia 23, has an interesting booklet entitled, "Tips for the New Buyer of Folding Paper Boxes."

Data on Alcohols

Fallek Products Company, 165 Broadway, New York 6, has available some new literature issued by Deyhag, Deutsche Hydrierwerke, said to be the world's oldest manufacturers of fatty alcohols and their derivatives, whom Fallek represents in the United States. Data sheets are available on fatty alcohols, stearyl alcohol, cetyl alcohol, Oleylcetyl alcohols compound, dehydag sulfates for cosmetic preparations, Dehydag sulfate CS-Paste. A booklet is available on biological bases for pharmaceuticals, another on suggested formulas for cosmetic preparations, and a third on suggested formulae for pharmaceutical ointments, liniments, and special preparations.

Perl Filling Machines

Perl Machine Manufacturing Company, 68 Jay Street, Brooklyn 1, N. Y., has issued a folder describing the different types of fully automatic filling machines which the company makes.

Selecting Microscopes

Bausch & Lomb Optical Co., 635 St. Paul Street, Rochester 2, N. Y., has published a 28-page guide (Booklet D-185) to assist science educators, researchers, laboratory technicians, and other microscopists in selecting the microscopes and accessories to meet their specific needs.

Uses, performance data, and specifications on more than 60 different microscope models and accessories are outlined. Discussed are the microscope needs of biologists, pathologists, physicians, industrial researchers, and bacteriologists. The appropriate instruments for their needs are described in pictures, tables, and texts.

Preparing Gamma Globulin

An interesting and informative article entitled, "Preparing Gamma Globulin," by G. S. Shilling, of Pitman-Moore Company, appears in the Third Quarter, 1954, issue of Instrumentation, published by Minneapolis-Honeywell Regulator Co., Wayne and Windrim Avenues, Philadelphia 44. Naturally, full information is given concerning the complicated temperature control system necessary in the process. The article is well illustrated.

Developing a Package

Creative Package Design is the title of a 20-page booklet issued by Hinde & Dauch, Sandusky, Ohio. The booklet, which is profusely illustrated, describes the steps taken in developing a package, the tests to be made, and other information useful to the user of packages.

Filtration Equipment

D. R. Sperry & Co., Batavia, Ill. has issued a catalog and specification booklet giving complete information on industrial filtration equipment and methods.

Claybourn Machine Bulletin

Claybourn Machine Corporation, Chicago, has issued an illustrated bulletin describing a new machine which automatically glues and tapes shipping containers in one pass.

Industrial Wastes Conference

Complete proceedings of the 1954 Southern Industrial Wastes Conference are now available from the Manufacturing Chemists Association, 1625 Eye Street N.W., Washington 6, D. C. Included in the proceedings are papers on air and water pollution abatement techniques by authorities in the field.

2,500,000,000 Anacin Tablets per year

Big names in tablet production look to Stokes for the presses which combine high production capacity with the unfailing reliability proved by years of experience. Many Stokes presses are known to have run steadily for 20 to 30 years with little or no maintenance.

Whitehall Pharmacal Company of Elkhart, Ind., uses a battery of nine Stokes model BB-2 rotary tabletting presses to produce its widely known Anacin Tablets. Eight more Stokes BB-2 presses now producing other Whitehall products can be called into service at any time to produce a total 2,500,000,000 Anacin Tablets per year on the basis of one eight-hour shift, if such production were needed.

Whitehall's familiar symbol is clearly embossed on each Anacin Tablet as it passes through the Stokes press. Finished Anacin Tablets are accurate in weight, uniform in density, attractive in appearance.

For production by the hundred or the million, Stokes has the right machines and proved techniques to help you realize practical and profitable manufacture. Stokes Advisory Service is available, at no obligation, to help solve problems concerning tablet formulas, punch and die design, and improved operating procedures.

F. J. Stokes Machine Company
Philadelphia 20, Pa.

STOKES

STOKES MAKES: High Vacuum Equipment, Vacuum Pumps and Gages / Industrial Tabletting, Powder Metal and Plastics Molding Presses / Pharmaceutical Equipment

Management Forum

by Francis Chilson

INDUSTRIAL CONSULTANT

Warehousing

I may have left myself open to misunderstanding in insisting that efficient use of space in warehousing will not permit "a place for everything and everything in its place." This adage applies only to static inventories that are to be held for a long time. This is not the case in the drug and cosmetic industries where inventories generally are fluid and constantly changing. Unless you have a vast amount of space to waste you cannot assign particular products to particular spots in the warehouse. On the other hand if everything is mixed up helter skelter you will encounter serious inventory problems. I believe in an open warehouse to house all inventories: raw materials, packaging materials, finished stock. Receiving and shipping are also part of the warehouse function. The general warehouse space should be divided up flexibly between the three classes of inventory. This does not mean that the finished stock storage will never contain any packaging materials or vice versa. The ideal way to warehouse is to arrange withdrawals so that open space between stacks is created as rapidly as possible. Then it can be used for some other items. This can be done and still maintain the three basic categories of warehouse stocks with only a reasonable amount of admixture along the borders.

One World

Arnold Toynbee has pointed out that speed of transportation and communications is rapidly making one world of this planet regardless of existing governments, and that people everywhere are demanding a better and easier life. We are helping out with our Point Four program, with loans and with the various plans for improving world health. Better health, better food and more of it, better education, better clothing, better housing and of course better wages. The trend is irreversible unless it is deflected by warlike governments. In a few years, therefore, when all the world has a better living standard and concomitantly higher wages, what will happen to the prices of the raw materials we import from everywhere, which are now based upon the wages of peasant or coolie labor? It will be a great world, this one world, where the cost of living will be so high no one will be able to afford it. Still wouldn't it be a marvelous thing for the drug and cosmetic industries—as well as for the peoples involved—if the money we are giving for military purposes to countries like Korea, Indochina, Pakistan, Turkey, Iran and God knows where else besides, was all earmarked: "These funds can be used only for projects that improve public education, public health, agriculture, roads and communications."

Automatic Set Up Box Making

The following letter from my friend, Dick Wellbrock, V.P. of New Jersey Machine Co., will interest all of you who make set up boxes:

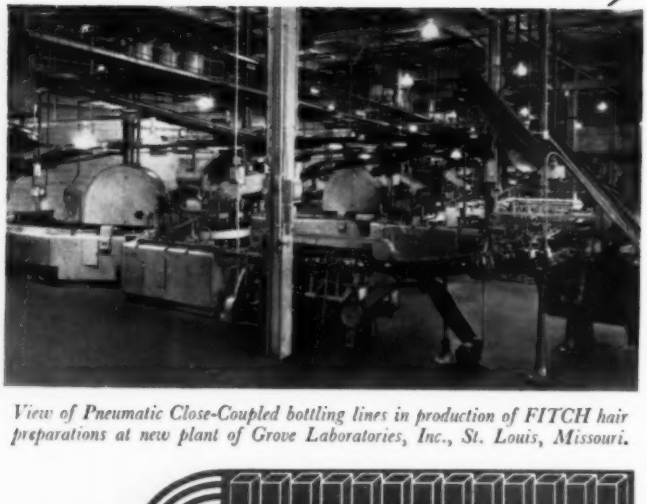
"I always enjoy reading your remarks each month and the June issue was particularly interesting because of your reference to the manufacturing of set-up boxes.

"As you know, our business originally was entirely devoted to the manufacturing of set-up paper box making machinery and then later we got into the labeling machinery business. Since then, we have increased our activities both in the labeling field and in the set-up paper box field and you may welcome our folder on our AUTO-FLEX, a machine which couples together the quad staying operation and the box wrapping operation, as well as the sheet gluing operation, all of which are usually done separately and all of which normally take extra space and are done without the benefit of any pace making machinery.

"The AUTO-FLEX (previously known as the Speedfeed) has converted the set-up paper box industry from batch manufacturing to continuous manufacturing and the flat, corner cut and scored cardboard blank is instantly coverted to the finished set-up box with fancy paper without any human handling whatsoever. There

FITCH and PNEUMATIC

BOTH *designed* **TO KEEP TROUBLE OUT OF YOUR HAIR!**



View of Pneumatic Close-Coupled bottling lines in production of FITCH hair preparations at new plant of Grove Laboratories, Inc., St. Louis, Missouri.

Grove Laboratories have been "expanding", so to speak, since they started business at Paris, Tennessee in 1889. In 1949 they acquired the famous FITCH hair preparations and added this business to their flourishing line of proprietary cold remedies.

To enlarge production capacity, Grove built a brand spanking new plant of modern design and has occupied it since 1952. As part of a progressive program to step up and *smooth out* production, Grove installed four Pneumatic Close-Coupled bottling lines to handle its FITCH output. The last word in automatic high speed cleaning, filling, capping and labeling equipment, these Pneumatic units deliver the goods without delay and with the very minimum of adjustment or attention. Down to the last detail they are designed to establish and maintain new high standards of "lower cost per container" performance. And they're doing it — day in and day out — here and elsewhere, in American's foremost factories.

PNEUMATIC SCALE CORP., LTD., 70 Newport Ave., Quincy 71, Mass. *Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.*

Canadian Division: Delamere & Williams Company, Ltd., Toronto.

★PNEUMATIC

Packaging and Bottling Equipment

is no space taken up by boxes which are first stayed and then must be temporarily stored, and there is no handling and re-handling between operations because the in-line array of equipment provides a straight line nonstop method of manufacturing. The only preparation that must be done is to cut the box blanks and cut the paper wraps, then stick each into the AUTO-FLEX system of set-up box manufacturing, and out on the other end without any human effort, energy or handling whatsoever, set-up boxes pour.

"We save the space that normally is occupied by work in process. We save more space because the output with this method is twice as fast as that of conventional set-up box manufacturing; where twelve people are normally needed for a given output we accomplish the same thing with four people.

"We are installing our AUTO-FLEX in many consumer box plants because it is a method of producing rigid, solid boxes from the flat, which is just as convenient as setting up knock-down cartons which can't possibly be as strong or as sturdy after they have been popped up as is the attractive, beautiful set-up box which can't be beat for display value, stacking purposes, protection to the contents, etc. Our method of manufacturing set-up boxes offers the same quick, easy setting up of the flat blank as does many of the folding boxes to which people have turned, although they had to compromise on other features.

"We trust that bringing this information to your attention will be of assistance to you and that you will not hesitate to ask us to give you further information or to give it to any of your clients. The AUTO-FLEX machine by itself is $13,000.00. The standard box wrapping machine is used in conjunction with it, therefore usually no additional investment is necessary because the wrapper is already on hand. For positive staying, we recommend a new thermoplastic Quad Stayer, the approximate cost of which is $5,500.00.

"We imagine that only a full appreciation of this could be obtained after some discussion, and the writer would be more than happy to visit with you when you are next in New York or at any place that might be more convenient for you. You name the time and the date and we'll work it out."

Treating Effluents

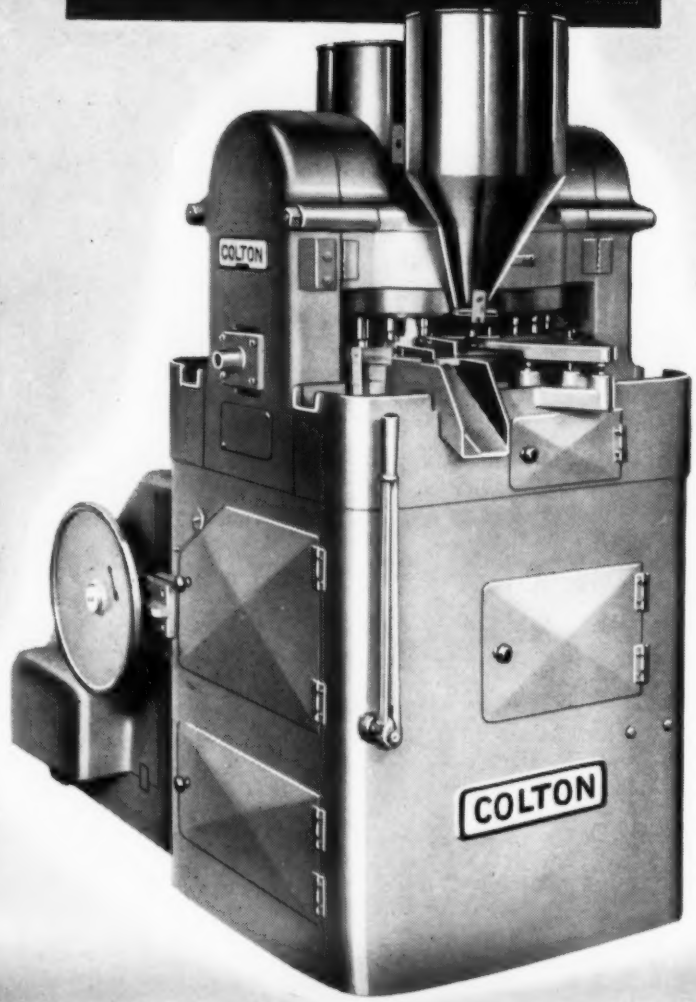
As industry grows, the problem of disposing of industrial waste becomes more acute. In the majority of states it is no longer possible to pollute streams and lakes with all kinds of effluents. Owing to a lack of proper public spirit, however, many manufacturers will still get away with all the law allows, and then some. Of course it is an expensive process to treat industrial wastes so that they are harmless, but it is an expense that should be borne gracefully, if for no other reason than as a contribution to good public relations. Nobody has the right to contaminate the air other people breathe; nobody has the right to contaminate the water they drink, bathe or fish in. In fact we need much tougher legislation than we've got. I have noticed, in those communities where the manufacturer cannot get away with anything, they go about the problem of waste disposal effectively if not gracefully. Sometimes communities do not cooperate with their own states in enforcing existing legislation. In their anxiety to attract new industries they will tell site seekers that while the legislation exists they do not enforce it very strictly. Any manufacturer who takes such statements literally is a sucker. Sooner or later the states do the enforcing instead of the localities and the localities themselves always become tougher after their industrial population reaches a satisfactory level.

The old method of disposal especially for high acid waste water was to use treatment ponds. In these ponds waste water was variously treated with ammonia, sodium carbonate or lime, depending upon availability of supplies and price. Ammonia is of course the most expensive way to neutralize acid wastes but many manufacturers make ammonia or have it as a by-product, hence it is cheap to use it to neutralize wastes especially when the waste can then be sold as liquid ammonium sulphate — a fertilizer — to surrounding farmers. Many chemical manufacturers whose plants are located near farming communities are finding this method of waste disposal very profitable. It has limitations in that waste disposal is a never-ending process while liquid fertilizer spreading can be done only when there is no snow upon the ground. The waste must be removed almost as fast as it is treated because its economic value is too little to permit the construction of the vast tank storage that otherwise would be required. Such a product could be concentrated or even dried for distant shipment by spray drying if vast quantities of hot exhaust gases were available from the main plant and the volume of concentrate would justify the construction of a spray dryer. Funny how simple arithmetic interferes so often with ideas that are sound from an engineering standpoint. A guy came to me the other day with a simple—so he thought —electrolytic method of neutralizing acid wastes continuously. He had everything neatly calculated except the cost of the electricity to operate the electrolytic cells.

The value of using sodium carbonate over lime in wash water treating is that, while more expensive, it is completely soluble and through the use of a mixing tank and continuous feeder it is a simple task to neutralize waste waters at any volume to the point where city sewer commissions will accept the treated effluent or states will permit it to be dumped into trout streams.

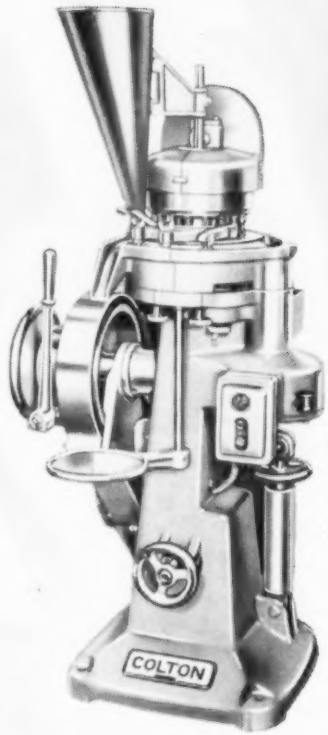
Lime is a cheap way to treat acid waste water, but if you do not have a continuous filter to remove the slurry it will precipitate on the bottom of settling basins, thus requiring periodic cleaning out. The best way to handle the resulting calcium sulphate is to filter it out with a continuous rotary vacuum filter. The cake can then be carted away and dumped or sold if there is a local industry that can use it. A few years ago an article like this would not have had any interest for

WHAT'S NEW WITH COLTON?



. . . world's fastest 16-punch single rotary tablet press . . . up to 1150 tablets per minute

Colton No. 216 Single Rotary Tablet Press (a best-seller when production was 800 tablets a minute) has been re-engineered and production stepped up to 1150 tablets a minute: sizes up to ⅝" diameter; ¾" depth of cell. Low first cost; low tool cost and quick, easy changeover to different products; variable speed drive; important NEW 3-Point Suspension Feed Frame for fast, precise adjustment and NO complex "front-to-back" weight adjustment. Performance equal to many antiquated, double (and expensive-to-tool) rotaries. Write for bulletin on No. 216.



. . . world's ruggedest high production double rotary tablet press . . . up to 2900 tablets per minute

Colton No. 260 Double Rotary Tablet Press is a high-speed, high-production giant so ruggedly built that it can be used for slugging as well as for tablet making. Pressures up to 20,000 lbs.; 25 to 41 punches; 1750 to 2900 tablets a minute; sizes up to 1 1/16" dia.; 1⅜" depth of cell; heavy duty motor; variable speed drive; anti-friction bearings; twin-disc clutch; automatic, adjustable excess pressure release; vital running parts dust-proof sealed; many other features. Write for bulletin on No. 260.

ARTHUR COLTON COMPANY
DIVISION SNYDER TOOL & ENGINEERING COMPANY
3505 E. LAFAYETTE • DETROIT 7, MICHIGAN
PLANT NO. 2—500 BELLEVUE, DETROIT • PLANT NO. 3—MANCELONA, MICHIGAN
Sales and Service Engineers Coast-to-Coast
Export Office—13 E. 40th St., New York City
Offices in Principal Cities Throughout the World
Specialists in Pharmaceutical and Packaging Machinery for Nearly 70 Years

other features. Write for bulletin on
No. 260.

TUBE FILLERS
OVENS
MIXERS
GRANULATORS
COATING STANDS
TABLET COUNTERS
No. 260.

Other readers, write for bulletin on No. 260.

the usual run of pharmaceutical manufacturers but this is the case no longer. Virtually all of the big companies and many of the small ones operate fine chemical plants, as the industry becomes more and more a branch of the chemical industry. The same thing applies to cosmetic companies. Some already are making fine chemicals or aromatics while others are merging with chemical companies.

The following information is supplied by manufacturers of the equipment described, and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Demineralizer

Representing the most advanced design in the modern art of ion exchange, a new bench model demineralizer has been announced by the Penfield Manufacturing Company of Meriden, Connecticut.

A completely packaged unit that requires only 15″ x 8″ of counter space, the new Model L-20 Penfield Demineralizer is a regenerative type and will supply up to 20 GPH of super high purity water at a chemical cost of only pennies for each 100 gallons produced.

For instance, in New York City, based on the unit's exchange capacity of 2200 grains between regenerations and a 50,000-ohms end point, the chemical costs for producing 60 gallons of Model L-20 demineralized water are three cents.

The unique Dual Action design of the demineralizer enables two columns to do the work of four. Raw water first is filtered through a stainless steel screen and then is given two complete demineralizations—passes through two columns, each of which contains both a cation resin bed and an anion resin bed—to produce a dually deionized effluent of less than 1 PPM.

Regeneration, including rinse-off, is accomplished in less than 45 minutes by simply turning a few valves conveniently located on the face of the control panel and clearly marked for trouble-free operation.

The unit's special flow control system automatically keeps incoming flow constant at not over 20 GPH. Thus ion exchange action of top efficiency always is assured.

Featuring non-corrosive construction throughout and equipped with a Penfield conductivity meter for continuous visual indication of the purity of the effluent, the unit is shipped completely assembled, including regenerated resin charges, ready for immediate use on connection with water supply.

Complete information on the New Penfield Model L-20 Dual Action Demineralizer can be secured by writing Mr. Edward H. Clohessy, General Manager, Penfield Manufacturing Co., Inc., 19 High School Avenue, Meriden, Conn.

Liquid and Paste Filler

Newest addition to the extensive Colton line of filling and pharmaceutical equipment is the No. 113 Combination Liquid and Paste Filler, Closer and Crimper with Ejector, recently announced by K. B. Hollidge, executive vice-president, Arthur Colton Company, 3400 E. Lafayette, Detroit 7, Michigan.

Describing the Colton No. 113 as the "First fine quality, low-priced machine which provides extreme versatility in filling liquids, creams and pastes," Mr. Hollidge points out that the machine also provides the traditional Colton accuracy of fill and that it includes all of the well-proved features of Colton dependability of operation.

Tubes are filled by accurately metered volume and not by displacement. Each tube receives an exact, predetermined amount of material and overfilling "for safety" is not necessary. Elimination of overfilling results in a constant and substantial saving, especially important when filling expensive materials.

For filling pastes which tend to trap air, a long, bent nozzle is provided so that tubes can be filled from the bottom up, without entrapped air. This operation is semi-automatic. Operation is fully automatic when filling liquids and light creams.

The positive feed gear pump for filling creams and pastes is the same unit used on Colton's highest priced,

high production machines. The positive feed with Overload Clutch assures feed at the proper time in the fill cycle and prevents damage to the machine.

Pedal operation through a single revolution clutch gives the operator positive no-tube-no-fill control as well as control of filling speeds.

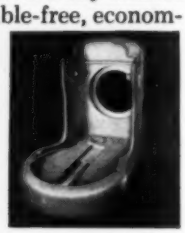
The No. 113 is adjustable to automatically provide either double or triple fold closure. An automatic electric ejector and discharge chute, simple and depend-

IN MIXING EQUIPMENT

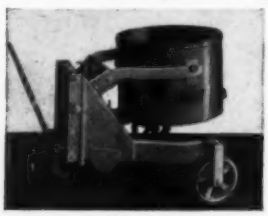
DAY means longer life span

DAY 100-gal. gearless type pony mixer at Eli Lilly & Co., Indianapolis, Indiana

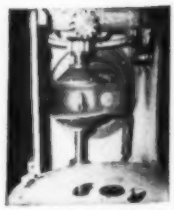
✲ DAY combines rugged construction with precision engineering. That's why DAY Pony Mixers are delivering *extra* years of trouble-free, economical operation in plant after plant. DAY features result in higher production at a lower cost, protect the quality and uniformity of your product. An important feature is the interchangeable can unit—eliminates delay between batches. Lift truck with hand pump hydraulic lift unit is optional equipment. DAY planetary mixing action plus agitator blade contouring delivers radial and lifting mixing action over depth of can. DAY rugged construction is unique. A one-piece heavy cast iron frame assures absolute rigidity, quiet operation. Mixers are driven by time-tested internally geared head motors through roller chain and sprockets enclosed in dust tight guards, exclusive with DAY. Whatever your requirements, there's a dependable DAY pony mixer engineered to do your job — better — more economically. For complete information, call your nearest J. H. Day field engineer, or write direct for Bulletin 500.



RUGGED CONSTRUCTION



INTERCHANGEABLE CAN



DEPENDABLE DRIVE

FOUNDED 1887

when you buy **DAY** *you buy dependability*

THE J. H. DAY COMPANY

INCORPORATED

1149 HARRISON AVENUE • CINCINNATI 22, OHIO

PRODUCERS OF QUALITY EQUIPMENT FOR BAKING • PAINT & VARNISH • CHEMICAL FOOD • RUBBER • PHARMACEUTICAL • COSMETICS • PAPER & PULP • EXPLOSIVES CERAMICS • CANDY • SOAP • SUGAR • MILK PRODUCTS • OTHER MAJOR INDUSTRIES

able in operation, gives the operator full freedom for loading tubes, thus permitting higher speed operation. All parts are readily accessible for easy cleaning.

Capacities range from 20 to 30 tubes per minute for pastes to 40 tubes for liquids; tube sizes are up to 1½" by 7" with a maximum fill of six fluid ounces. The capacity of the hopper is 15 gallons. Power is furnished by a ½ H.P. motor. All contact parts are of stainless steel. The pedestal is fabricated of welded steel plate and is thoroughly braced for rigidity and alignment and to prevent vibration which would cause unnecessary wear and which might affect precision.

Small Packager Redesigned

Packer Machinery Corporation, 30 Irving Place, New York 3, has redesigned its Model A, Small Packager, filling machine.

It was found that Small Packagers preferred a drill press type handle, but unlike a drill press, one that locks into position during the filling cycle; and such a handle was installed on the machine. Another feature is the installation of the motor, pump, filter, etc., out of sight within the body of the machine; the new model is now equipped with Standard, interchangeable, Stainless Steel spout assemblies, such as is found on the larger Packer fillters. It is claimed by the manufacturer that the new filler is more compact, and has an ease of operation that makes for more efficient filling.

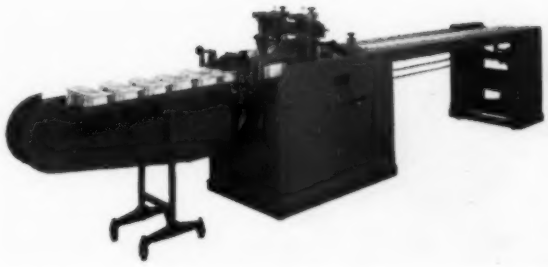
The Model A now comes in a Vacuum model, equipped with three to six spouts; and a Gravity Type model, equipped with three spouts, both with Clear Plastic Tubing, and fully adjustable for the handling of containers, from ounces to quarts.

Carton Glue-Sealing Machine

Container Equipment Corporation, 78 Locust Ave., Bloomfield, New Jersey 2, announces a new Carton Glue-Sealing Machine, Model 3901B. Many new production features enable the machine to provide as much as a 100 per cent increase in production over previous models.

The most advanced feature consists of the vertical glue wheels which apply glue in any desired pattern to any or all flaps of the carton. The uniform application of glue assures a neater, cleaner seal. In addition, maintenance and clean-up are speeded by the ease of removal of glue rollers and scrapers.

Like other CECO cartoners and glue sealing machines, the semi-automatic Model 3901B requires only a simple adjustment to handle cartons in a wide range of different sizes and shapes. Changeover may be made by any unskilled operator in less than three minutes. The machine will handle gluing of the economical "meeting outer flaps" type of carton, as well as full overlapping and partial overlapping outer flaps, in all cases assuring a positive inner seal. Variable speed controls adjust the machine to production requirements.



The new vertical gluing method is also available on the CECO Models 40 and 45 cartoners. Glue sealers and cartoners are all complete self-contained units, mounted on casters for easy portability.

Suppository-Wrapping Machine

The Pharmaceutical and Chemical Industry Supply Corp., a division of American Roland Corp., announces a new automatic suppository-wrapping machine which can use cellophane, aluminum foil, or a combination of both. Operation of the Model VS II is simple enough to be controlled by one unskilled attendant. Suppositories of any size or shape are hermetically sealed into a continuous strip at speeds up to 100 per minute; an automatic knife cuts the strip into units containing from one to 12 suppositories, as desired. Each suppository is kept pure and dust-free in its own air-tight compartment. Refrigerated storage is no longer necessary, as the hermetically sealed suppositories will retain their shape even under very high temperatures.

A timing device assures accurate centering of the imprint directly over each individual suppository. In addition, a counting mechanism records the number of suppositories wrapped.

Full details are available from Pharmaceutical and Chemical Industry Supply Corp., 16 Hudson Street, New York 13, N. Y.

New Bulk Conveyor

Belt Handy-Handler Model 600, a new lightweight bulk conveyor offered with either a rubber belt or steel chain and plow-contour rubber flights, is now available through materials handling distributors, according to officials of The Belt Corporation, Orient, Ohio.

Model 600 replaces Model S, the original lightweight bulk conveyor. The new unit incorporates many improvements based on experiences in the field with Model S.

Model 600 is specially designed to load and unload trucks and cars, at warehouses, storage bins, processing plants and similar installations moving industrial materials in bulk.

It handles bones, sawdust, salt, starch powders, wetting agents, meat scraps, peat and many other nonabrasive materials. Test runs have shown capacities as high as 24 tons of coal per hour (rubber belt model operating at 450 f.p.m.).

Replaceable wear strips in the trough increase the life of the unit. All-bolted construction throughout simplifies replacement of parts worn through long use. Improved heavy-duty neoprene moulded edge belt is used for longer life in rubber belt units.

Chain model with top power unit weighs only 100 pounds, and may be positioned and operated by one man. Both chain and rubber belt models are manufactured in standard 16-ft. lengths. Extension sections 4 ft. long are available to increase rubber belt models to approximately 20 ft. and chain models to 28 ft.

A two-wheeled dolly, speed reducer, trough cover, extension sections and many other accessories are manufactured by Belt Corporation for the Model 600 Handy-Handler.

New Materials-Handling Technique

A new and unique method of industrial palletizing which may revolutionize present ways of handling and shipping bagged and even packaged commodities has been developed by American Cyanamid Company which is already using the method in shipping its AERO Phthalic Anhydride. Extensive tests have demonstrated that the new method offers a number of important time and money-saving advantages.

Basic component of the new system is the Accopak Pallet. This consists of a paper sling fitted with paper tubes. New type bayonet forks, readily attachable to any present type of fork-lift truck, slip into the tubes, enabling the palletized load to be lifted, carried and stacked in single, double or triple-deck tiers without removal of the pallet during storage or shipment.

One of the important advantages offered by the new Accopak Pallet is in connection with loading and unloading freight cars or motor trucks. The Accopak Pallet sling is no thicker than heavy wrapping paper and the entire pallet weighs less than three pounds; an entire load can be shipped double-decked and completely palletized without the use of wooden pallets, and can be unloaded and warehoused as a completely palletized shipment.

Tests have indicated a saving of from eight to ten man hours in unloading a completely Accopak Palletized shipment as compared to handling by non-unitized methods. One man with a fork-lift truck, and without the aid of a helper, can unload and stack in warehouse in approximately one-fifth of the time previously required with non-unitized bagging. Since the bags are shipped completely palletized, they arrive in more compact shape, stack more neatly, and take less space.

In warehouse storage, special stacking on wooden pallets is not necessary with Accopak as it is with paperboard-type bases; Accopak can be stacked in multiple-deck fashion without removal of the pallet, at the same time permitting easy recovery at any time.

Accopak Pallets can be easily stored and assembled. They can be rolled up like a map or stored flat, with the tubes tied in a convenient size bundle. The Pallet can be assembled in a few seconds simply by inserting the tubes in the ends of the sling.

The special bayonet-type forks, designed by Cyanamid, can be purchased for any type fork-lift truck. Change-over between the bayonet-type and the chisel-type forks can be accomplished in a matter of minutes; as a matter of fact, the bayonet-type forks can be used to handle wooden pallets.

Accopak Pallets will cost substantially less than the expendable paperboard base type of pallet and a fraction of the cost of wooden pallets.

Development of the Accopak Pallet is a by-product of American Cyanamid's continual study of materials-handling techniques as well as its continued extensive research in the paper chemicals field. One of the largest producers of chemicals for the paper-making industry, Cyanamid has developed a special melamine resin called Melostrength Resin, which imparts greater strength to paper, wet or dry. Accopak Pallets are made of tough Melostrength paper.

The Accopak Pallet is being patented by American Cyanamid which will offer manufacturing licenses to companies in the paper industry.

available free on request!

sectionalized for your convenience!

complete!

fact-filled!

Find your answer to packaging and wrapping problems in this book!

As easy to use as a dictionary, and a hundred times more interesting . . . because it can save you money! The new Battle Creek *"Continuous Flow"* Catalog shows you how you can save money by wrapping the fast, versatile Battle Creek way. It is carefully indexed according to type of product or problem. You simply turn to the section YOU are interested in, find the FACTS you need to know in order to select the proper machine you need for your particular packaging application.

FOR

bakery products
textiles
frozen foods
prepared foods
paper products
meats
drugs
confectionery
cereals

send this coupon *or write* **today**

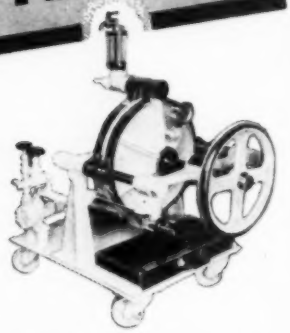
BATTLE CREEK
packaging machines, inc.
800 MERRILL PARK
BATTLE CREEK, MICH.

BATTLE CREEK PACKAGING MACHINES, INC.
BATTLE CREEK, MICHIGAN

Please rush my copy of the new Battle Creek Packaging Machine catalog today!

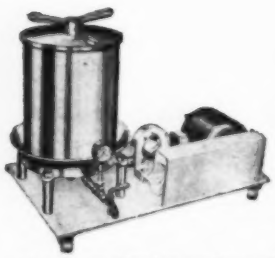
NAME _____ TITLE _____
COMPANY NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

. . . . Step Up your production with ERTEL ASBESTOS DISK FILTERS!



1. EBW MODEL PORTABLE FILTER

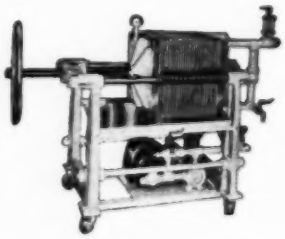
A highly efficient, readily portable filter that meets requirements for smaller capacities. Perfromance-proven over the years in many hundreds of plants throughout the world. Perhaps Ertel EBW model can economically speed up your production. Ask for full particulars — an EBW is in operation in your vicinity, right now!



2. ECD MODEL ENCLOSED DISK FILTER

Typical of Ertel craftsmanship is this Positive Seal Multi-Purpose Disk Filter. The outstanding feature of independent filtering elements provides positive seal of any type filtering medium. Cylinder prevents loss of liquid — particularly well adapted for volatile liquids as well as many other ordinary filtering requirements.

3. EU MODEL UTILITY FILTER



The Ertel Filter that's designed to use asbestos filter sheets, filter cloth, filter paper or filter cloth and filter aid. Standard units in bronze, nickel plated, stainless steel or hard rubber circulatory system. Comparison and operation records prove the EU Model unmatched in design, versatility and operation-life. Experience has shown that the great majority of filtration problems can be solved by your consultation with our engineers. May we help you?

ASK FOR ILLUSTRATED CATALOG
Describes the complete line of precision built Ertel Liquid Handling Equipment for Industry.

ERTEL ENGINEERING CORPORATION
KINGSTON 1, NEW YORK
Branch Office & Showroom Located in New York City
COMPLETE LINE OF *Liquid Handling Equipment*

ERTEL

LOOK at the RECORD Don't Just Look at the price tag

It's cost per year that counts, when you make an investment in capital equipment such as automatic labeling machinery.

Here are a few of the nationally famous brands labeled by WORLD LABELERS, with the year these brands were *first* labeled by WORLD, and the year that new WORLD Labelers have been most recently acquired.

	First	Latest
ARMOUR	1913	1952
BUDWEISER	1906	1953
BALLANTINE	1906	1954
BEST FOODS	1923	1951
BLATZ	1910	1951
BLUE PLATE FOODS	1917	1951
BORDEN	1918	1952
CALVERT	1937	1952
CANADA DRY	1922	1954
CARLINGS	1925	1953
COCA-COLA	1918	1953
CROSSE & BLACKWELL	1927	1951
FINAST FOODS	1927	1951
FOUR ROSES	1929	1952
GENERAL FOODS	1924	1951
H. J. HEINZ	1909	1954
ELI LILLY	1908	1951
MEAD-JOHNSON	1921	1953
MERCK	1922	1952
MILLER'S HIGH LIFE	1907	1954
MONARCH FOODS	1916	1953
NATIONAL FRUIT PROD.	1916	1953
PABST BLUE RIBBON	1905	1953
POND'S EXTRACT	1909	1953
QUAKER MAID	1928	1954
REXALL	1909	1952
RUPPERT	1908	1953
SCHENLEY	1911	1953
SCHLITZ	1906	1953
SEAGRAM	1934	1953
TABASCO	1927	1954
HIRAM WALKER	1933	1952
WELCH'S	1916	1951
WHITE ROCK	1905	1954

WORLD LABELERS

Ask yourself whether the makers of products like these buy, *and buy again*, on the basis of price or *performance*.

ECONOMIC MACHINERY COMPANY
58 FREMONT STREET, WORCESTER 3, MASSACHUSETTS
Division of GEO. J. MEYER MANUFACTURING COMPANY
CUDAHY, WISCONSIN, U. S. A.

Beautiful craftsmanship in the Matchabelli Crown bottle, in keeping with the traditional excellence of the perfume, calls for impeccable labeling — deftly accomplished by applying the label in the recessed base of the flask... a precision registry that calls for a

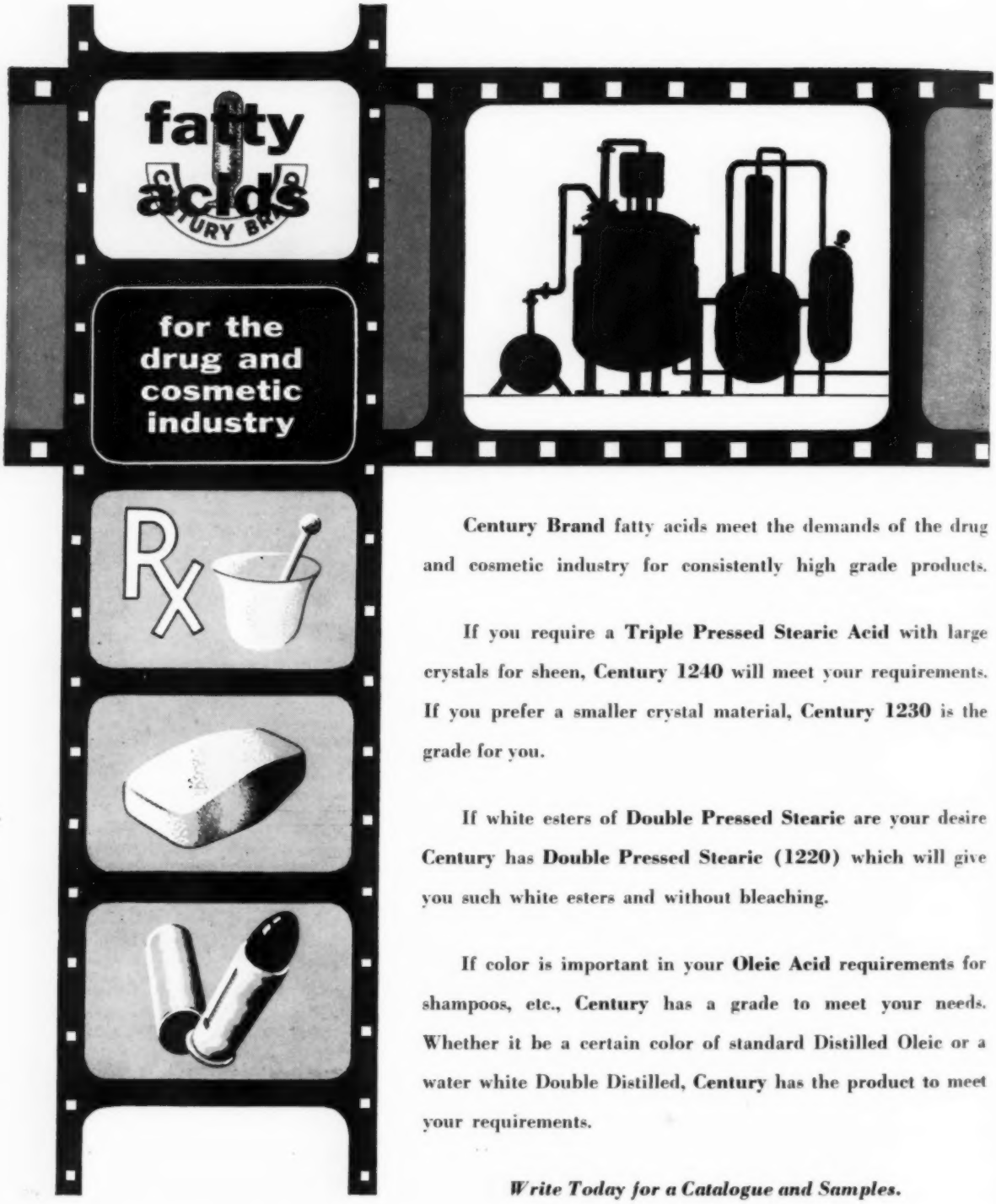
PONY LABELRITE®

NEW JERSEY MACHINE Corporation

AUTOMATIC LABELING • PACKAGING — PAPER BOX MACHINERY • MAKERS OF THE PONY LABELRITE

FACTORY SALES AND SERVICE BRANCHES
CHICAGO, CINCINNATI, LOS ANGELES

MAIN OFFICE & FACTORY: 1550 WILLOW AVENUE, HOBOKEN, N. J.



Century Brand fatty acids meet the demands of the drug and cosmetic industry for consistently high grade products.

If you require a **Triple Pressed Stearic Acid** with large crystals for sheen, **Century 1240** will meet your requirements. If you prefer a smaller crystal material, **Century 1230** is the grade for you.

If white esters of **Double Pressed Stearic** are your desire **Century** has **Double Pressed Stearic (1220)** which will give you such white esters and without bleaching.

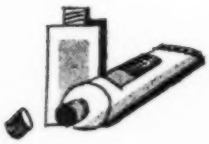
If color is important in your **Oleic Acid** requirements for shampoos, etc., **Century** has a grade to meet your needs. Whether it be a certain color of standard Distilled Oleic or a water white Double Distilled, **Century** has the product to meet your requirements.

Write Today for a Catalogue and Samples.

W. C. HARDESTY CO., Inc.

Century Stearic Acid Products, Inc.

25 MAIN STREET, BELLEVILLE 9, NEW JERSEY
PLANT: DOVER, OHIO
In Canada: W. C. Hardesty Co. of Canada Ltd., Toronto



Advancing Therapy

Miliaria and its Complications

In discussing miliaria and its complications, I. I. Lubowe and H. H. Perlman (*Arcy. Dermat. & Syph.* 69: 543, 1954) observe that while prickly heat, or "heat rash," is generally recognized as a trivial dermatosis, actually it is occasionally accompanied or followed by dangerous sequelae and discomforting complications. The two common complications of miliaria are pustular miliaria, better known as periporitis staphylogenes, and the bullous variety of impetigo contagiosa, both caused by the *Staphylococcus aureus*.

The prevention of miliaria (periporitis staphylogenes and impetigo contagiosa caused by excessive sweating) depends upon eliminating those factors which tend to cause profuse sweating. Miliaria due to overheated rooms and excessive clothing can be prevented simply by advising the mother to reduce the room temperature and to use less oppressive clothing on the infant's body. In summer, the infant should receive frequent cool baths. In winter, the infant should not be overheated. Wool should be substituted by cotton and rayon. In the summer, cotton underwear is ideal. For all other seasons, including the late fall, winter, and early spring, heavier cotton may be used. During very hot days, the infant should be sponged frequently with cool water or hamamelis (witch hazel). After drying, a dusting powder such as cornstarch or an unscented talc may be used. Strong alkaline soaps are contraindicated. Studies have demonstrated the degerming effect of continuous use of hexachlorophene soaps and such soaps have been found useful in preventing periporitis staphlogenes.

In considering the therapeutic management of the complications of miliaria, it is noted that since ointments generate heat and macerate the skin, they are best avoided. Occasionally, good results are secured through the use of wet dressings of boric acid, magnesium sulfate, and aluminum acetate solution (Burow's solution). The use of the antibiotics is effective, particularly intramuscular injections of penicillin procaine for aqueous injection. The dose that is administered depends upon the extent and depth of the infection. In the infant and young child, we usually give 450,000 units of aqueous penicillin procaine daily, until the condition improves. In addition to the parenteral therapy, topical application of the nonsensitizing antibiotics has been prescribed. The most effective and least sensitizing are chlortetracycline (Aureomycin), oxytetracycline (Terramycin), chloramphenicol (Chloromycetin), erythromycin, bacitracin, and neomycin ointment. They can be dispersed in a polyethylene glycol base or an oil and water emulsion to aid the penetration of the active medicament so that the affected eccrine glands are reached.

Lubowe and Perlman have found that the anticholinergic compounds seem to present a beneficial effect in the reduction of cases of hyperhidrosis and dyshidrosis. They suggest a trial of the anticholinergic compounds in the young child who shows disposition to repeated attacks of periporitis. Naturally, the dosage would have to be reduced, depending upon the weight of the patient. In therapeutic trials they have found the least toxic of the anticholinergic compounds to be mepiperphenidol bromide (formerly piperphenamine; Darstine Bromide).

When the lesions have progressed to the stage of well-defined pustules, bullae, or abscesses, these should be incised under aseptic precaution and the pus evacuated. Crusted lesions must first be removed through the detergent use of soap and water before a topical application of an antibiotic ointment is made.

Antiphlogistic baths of starch or oatmeal may be prescribed to relieve the local discomfort of the highly irritated skin. Frequent sponging with hamamelis, followed by dusting with a fine unscented talc is comforting to the patient. The following prescriptions have been found useful:

1

Hexachlorophene (0.5 per cent)	**0.5 Gm.**
Boric acid	**3.0 Gm.**
Diluted alcohol, U.S.P. (70 per cent), to make	**100.0 cc.**

2

Zinc oxide	**30.0 Gm.**
Talc	**30.0 Gm.**
Bentonite	**4.0 Gm.**
Hamamelis	**30.0 cc.**
Calcium hydroxide solution, to make	**180.0 cc.**

Cod Liver Oil for TB Patients

In a report to the National Tuberculosis Association, H. R. Getz (through *Science News Letter* 65:361, 1954) stated that patients with moderately advanced tuberculosis should get crude cod liver oil concentrate in addition to their regular diet. This is the only way, he found, that enough vitamin A can be put into their bodies in a form that can be utilized. All the patients in his study were night blind and showed other eye conditions resulting from vitamin A lack. The patients also were short on vitamin C, but this deficiency could easily be made up by adequate doses of the vitamin. The vitamin A deficiency, however, seemed due to the body's inability to get all the benefit out of the vitamin unless it was given in the crude cod liver oil concentrate form.

Sarkomycin, an Anti-Cancer Substance

It is pointed out by H. Umezawa and his colleagues (*Antibiotics & Chemotherapy* (4:541, 1954) that studies of antibiotics have indicated that streptomyces are a rich source of a variety of compounds. Attempts to search for an anti-cancer substance in this field seem quite reasonable. About 200 soil streptomyces were examined by Yamamoto's anti-cancer screening method, and the existence of substances exhibiting selective toxicities to the cells of Yoshida sarcoma of the rat was confirmed. Among those anti-cancer substances obtained, sarkomycin was found to be the lowest in toxicity and the most effective on Ehrlich cancer of mice. In continued studies, it was found that sarkomycin can be extracted by a solvent process or adsorption process. Sarkomycin has acidic characteristics. It exhibits weak antibacterial effects on certain bacteria. In toxicity tests on mice, the LD_{50} was 800-1,600 mg./Kg. by intravenous in-

HEYDEN BENZALDEHYDE

OUTSTANDING Purity and Uniformity...

Purity and uniformity are important in any product, for any process application, but these features are particularly vital in the use of Benzaldehyde as an odorant or flavor ingredient. Heyden Benzaldehyde N.F. (F.F.C.) stands out as the product of choice for the manufacture of fine cosmetics and flavoring agents.

The high quality of Heyden Benzaldehyde Technical makes it an advantageous starting material for a growing number of industrial products. It is extensively used as an intermediate for dyes, pharmaceuticals and a variety of organic chemicals.

Heyden Benzaldehyde, N.F. or Technical, is shipped in 450 lb. stainless steel drums, 100 lb. glass carboys, and 50 lb. tins.

OTHER HEYDEN INTERMEDIATES

- CHLOROBENZALDEHYDES
- CHLOROBENZOIC ACIDS
- ANISOYL CHLORIDE
- ANISIC ACID
- BENZILIC ACID
- BENZOIC ACID
- METHYL BENZOATE
- ETHYL BENZOATE
- SODIUM BENZOATE
- TOLYL ALDEHYDE
- RESORCINOL
- METHYL SALICYLATE
- PHENYL SALICYLATE
- SALICYLIC ACID
- PROPYL GALLATE
- BENZOYL CHLORIDE
- BENZYL CHLORIDE
- PARASEPTS
- FORMIC ACID

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION

342 Madison Avenue • New York 17, N.Y.

CHICAGO • CINCINNATI • DETROIT • PHILADELPHIA • PROVIDENCE • SAN FRANCISCO

ject
eou
by
tra
the
2.5
adı
hib
car

Ch

Ro
(*J.*
tha
zin
pa
ma
na
giv
se
eff
po
fro
ne
les
ge
du
th

er
wi
co
sy
re
re
er
st
ol
ca
se
el
es
a

L

n
C
fo
o
s
u
h
t
o
e
I
c
s
c
i

S

jection, 400-800 mg./Kg. by subcutaneous injection, and 4,800-6,400 mg./Kg. by oral administration. The daily intravenous injection of 1 mg. per mouse, the daily intraperitoneal injection of 2.5 mg. per mouse, and the daily oral administration of 5 mg. per mouse inhibited the development of Ehrlich carcinoma of mice.

Chlorpromazine for Pain

M. A. Sadove, M. J. Levin, R. F. Rose, L. Schwartz and F. W. Witt (*J.A.M.A.* 155:626, 1954) have found that the new compound, chlorpromazine (Thorazine) is useful for relieving pain in patients who can no longer be made comfortable with large dosages of narcotics and sedatives alone. When given chlorpromazine with narcotics or sedatives that previously proved ineffective for relieving pain, 22 of 28 patients obtained satisfactory relief from severe abdominal, bone, and neuritic pain associated with malignant lesions. It seems that enhanced analgesia with chlorpromazine is, in part, due to chlorpromazine's ability to alter the patient's reaction to pain.

Chlorpromazine, since it has antiemetic properties, served a dual purpose when nausea and vomiting accompanied conditions of pain. Of six patients with symptoms of nausea and vomiting, five reported complete relief; one, though relieved of nausea, obtained only moderate relief from vomiting. Two patients stopped taking chlorpromazine because of pyrosis and one because of tachycardia and ataxia. Drowsiness was observed to be the most prominent side-effect of chlorpromazine and, to a lesser extent, dryness of the mouth, pyrosis, and mild hypotension.

Lipstick Production

In a paper presented at the Spring meeting of the Society of Cosmetic Chemists, A. L. Fishbach discussed the formulation, manufacture and analysis of lipsticks. He pointed out that lipsticks are formulated with an oil base—usually with castor oil or its derivatives—to act as a carrier for the insoluble lake colors and a partial solvent for the brominated fluoresceins. Mixtures of waxes are used as hardeners and to otherwise affect the texture and properties of the stick. By varying the proportions of beeswax, ozokerite, candelilla, and carnauba waxes, hardness, strength, and resistance to temperature changes can be controlled. Lanolin and its derivatives, mineral oil, petrolatum, and partially hydrogenated vegetable oils are used as emollients. Creaminess, ease of application, and the like, are controlled by addition of lower aliphatic and polyol esters of fatty acids. High stain lipsticks utilize a solvent for the brominated fluoresceins. Propylene and polyethylene glycols, as well as their esters, are most commonly used for this purpose. Coupling agents to keep the dye solvent in solution with the waxy materials are advisable. Reiinoleate esters are effective for this purpose. About 10 per cent lake color is used to secure the mass tone and lip tone of the lipsticks. About three per cent of brominated fluoresceins are used as lip stains. Colors are mixed with oil and ground through a roller mill. Waxes and other ingredients are separately melted and added to the color in oil.

Corticotropin Zinc Phosphate

Three studies on corticotropin zinc phosphate, a long-acting aqueous preparation, have appeared in the *Lancet* (1:543, 545 and 547, 1954). In the first report, R. Greene and J. Vaughn-Morgan state that the combination of corticotropin with zinc phosphate provides an easily injectable preparation whose effects, judged by amelioration of symptoms and by an increase in the urinary excretion of 17-ketosteroids lasts from one to three days. The immediate symptomatic effects were, in a series of six cases, always as good as, and in all but one instance better than, those of ordinary corticotropin. The effects were more lasting in four cases, but the lack of superiority shown by the zinc preparation in the other two cases was due to the surprisingly long activity of the ordinary corticotropin. Although the effects in several cases lasted two days or more when the preparation was first tried, in all the cases better clinical results were achieved by daily injections of 10 to 20 units. The exception was the patient with atopic eczema, in whom only a temporary improvement was obtained. No side-reactions were experienced.

Similarly, following studies on another series of cases, D. G. Ferriman, A. B. Anderson, and P. P. Turner reported that corticotropin zinc phosphate has proved clinically effective and has technical advantages over oily preparations of corticotropin.

In the third report, S. A. den Oudsten, L. van Leeuwen and R. J. Coers stated that corticotropin zinc phosphate was used in 25 patients with rheumatoid arthritis. The therapeutic effect did not differ essentially from the effect obtained by frequent injections of ordinary corticotropin. Corticotropin zinc phosphate stimulates the adrenal gland for 24 to 48 hours or more after a single injection, as reflected by the eosinophil response and the urinary excretion of 17-ketosteroids, sodium, and potassium. A single injection of 20 I.U. of corticotropin zinc phosphate has the same effect as four doses of 20 I.U. of ordinary corticotropin injected four-hourly. The increased action of corticotropin zinc phosphate is probably due to the gradual release of the active substance from the zinc complex. In rheumatoid arthritis corticotropin zinc phosphate proved satisfactory in a daily dose of 20 I.U.; in some patients injections twice weekly were sufficient as maintenance therapy. No side-reactions were observed.

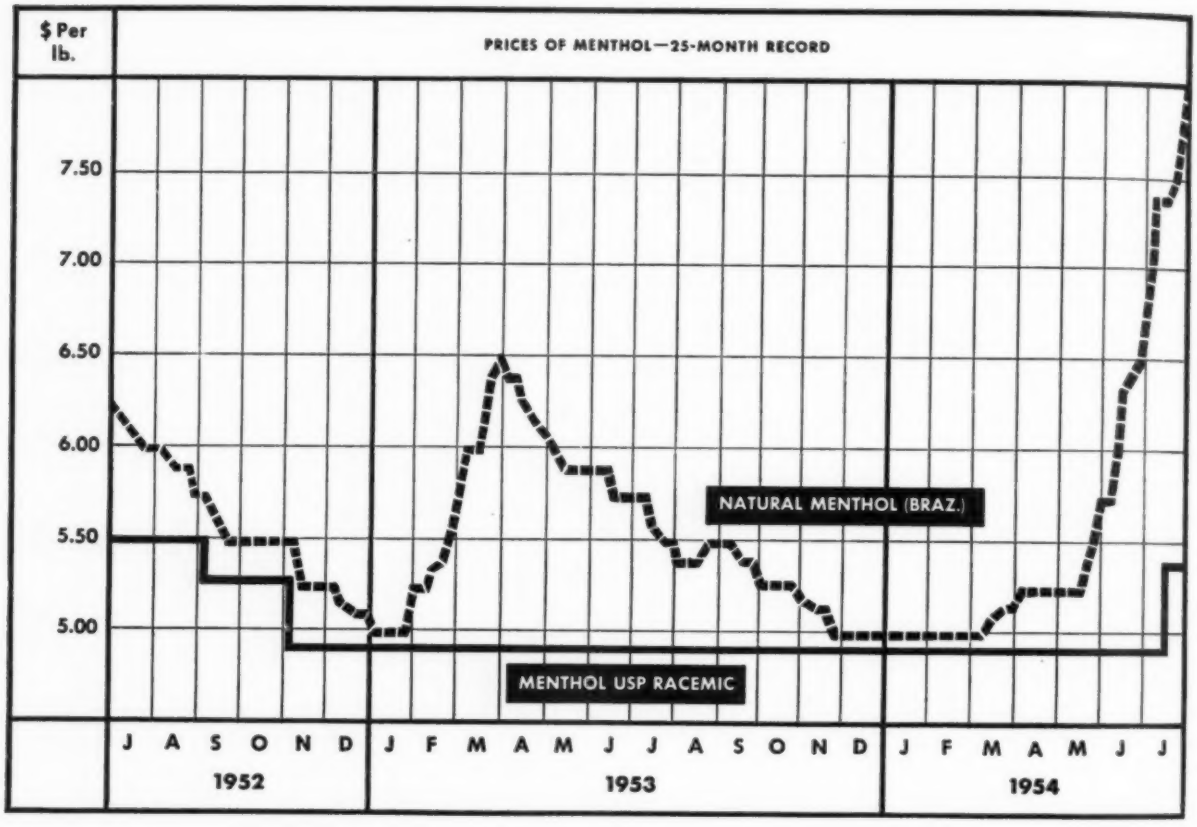
Rescinnamine, New Alkaloid from Rauwolfia Serpentina

It is pointed out by M. W. Klohs, M. D. Draper and F. Keller (*J. Am. Chem. Soc.* 76:2843, 1954) that interest in Rauwolfia therapy for the treatment of hypertension has prompted extensive chemical investigations of the Indian plant *Rauwolfia serpentina* Benth in a search for its physiologically active principles. Recently the isolation and structural elucidation of reserpine, an alkaloid possessing pronounced sedative and hypotensive activity, has been reported.

Extensive pharmacological and clinical comparison between reserpine and an alkaloidal extract[5] of *Rauwolfia serpentina* indicated, however, that reserpine could not account for all of the hypotensive and sedative activity of this fraction. As a result of further chemical studies Klohs and his associates wish to report on the isolation of another highly active alkaloid, rescinnamine, the 3,4,5-trimethoxycinnamic acid ester of methyl reserpate. The isolation of rescinnamine from its natural source was effected by subjecting the benzene soluble portion of the alkaloidal extract, after removal of reserpine by crystallization from methanol, to chromatographic separation on acid washed alumina. An amorphous fraction was obtained which readily crystallized from benzene yielding rescinnamine as fine needles, melting at 238 to 239° C. Data on the physical characteristics are given and it is reported that pharmacological tests on rescinnamine show it to have hypotensive, bradycardic and sedative activity similar to that of reserpine.

Givaudan Menthol USP Racemic

- *Stably priced far below Natural and Synthetic Laevo Menthols*
- *Consistently your best buy!*



The above graph shows the remarkably firm, dependable – and low – price levels of Givaudan Menthol USP Racemic during the past two years – a striking contrast to the erratic course of Natural Menthol, now climbing to an all-time high!

In other respects as well, Givaudan Menthol USP Racemic offers exceptional advantages because

... its quality is uniformly high

... it is in ample supply domestically – no danger of shortages or import difficulties

... it has been proved in over ten years of successful use in pharmaceutical products – while priced substantially below both the Natural and Synthetic Laevo Menthols

So specify Givaudan Menthol USP Racemic. You will benefit from savings in cost... and from the consistent high quality which distinguishes every Givaudan product.

Leaders in Aromatic Chemical Research

GIVAUDAN - DELAWANNA, INC.

330 West 42nd Street · New York 36, N.Y.

Branches: Philadelphia · Boston · Cincinnati · Detroit
Chicago · Seattle · Los Angeles · Toronto

Compounder's Corner

Vanishing Cream Defects

In discussing the production of vanishing creams, V. Vasic (*Perf. & Essent. Oil Rec.* 45:55, 1954) notes that such products usually consist of stearic acid, auxiliary substances, humectants, alkalis, preservative, water and perfume. Although the formulation of vanishing cream is not complicated and the manufacturing process does not involve special manipulation, it is not so simple to obtain a completely satisfactory cream. Many defects can appear and methods of dealing with some of these defects are considered by Vasic.

For example, in the event that a cream lacks "body," he advises that the incorporation of two to three per cent of spermaceti, cetyl alcohol or glyceryl monostearate and one to 1.5 per cent of a vegetable oil—olive or almond—will make the cream much richer in consistency with much more body. At the same time these additions will improve the texture of the cream. The addition of mineral oil up to three per cent will produce a greasier cream with more body. In connection with this latter addition Vasic suggests that the inclusion of two to five per cent of mineral oil will improve a vanishing cream that is not smooth enough on application. This additional mineral oil should not be incorporated into the formula, but added to the cream next day and distributed through the mass by slowly mixing in the shortest possible time in order not to obtain too soft a cream. When the mineral oil is evenly distributed through the vanishing cream mass, there is no danger that the oil will separate after some time.

Aside from a poorly balanced formula, a grainy cream can be formed when the fatty and aqueous phases have different temperatures at the moment of saponification, improper mixing and too much cooling of the pan in which the phases were mixed. The graininess especially occurs when the mixing pan is cooled too much. In cases of graininess the cream should be remelted, but not heated too long or at a high temperature, otherwise some parts of water will be lost and the cream will be of a much harder consistency; also a loss of perfume could occur. The melted cream is then transferred to a mixing vessel and proceed as usual.

Lumpy creams may also be due to incorrect manufacturing procedures. To prevent lumpiness, excessive temperature at the moment of mixing fatty and aqueous phases should be avoided. A temperature higher than 85° C. will certainly spoil the cream, because of the rapid formulation of sodium stearate which provokes lumpiness.

The view that passing through a roll mill will improve a lumpy cream is completely incorrect. In a vanishing cream, after an emulsion has formed and cream has cooled, the process of the crystallization of free stearic acid will occur. This process makes the cream firm. Passing the cream through a roll mill, this system of stearic acid crystals will be destroyed and the cream becomes a semi-liquid mass. Even after long standing, such a cream will not be brought back to its previous state of consistency.

A vanishing cream may be too soft when an excess of saponifying agent or too little stearic acid has been used. The proportion of saponified stearic acid to free stearic acid is very important. A high proportion of saponified stearic acid gives a soft cream.

In addition, too long and too fast mixing may produce a cream of a nearly liquid state, especially when the stearic acid is saponified *in situ* without the presence of auxiliary stabilizing agents. The speed and duration of mixing should be strictly controlled for all batches and once they have been established satisfactorily must always be kept the same. The mixing can be stopped when the temperature of cream falls to 50° C., then the cream is transferred to a suitable storage vessel.

Being oil-in-water type emulsions, vanishing creams are capable of drying up in the jar during standing. When a jar of vanishing cream is left uncovered or improperly closed, the cream soon dries up until it shrinks away from the side of the jar and looses its creamy consistency. To prevent rapid drying practically all formulae contain a certain amount of an humectant—glycerine, diethylene glycol, diethylene glycol mono-ethyl ether, sorbitol or propylene glycol. However, the incorporation of a humectant, even up to 15 per cent, will not prevent the drying out of the cream. Larger amounts than 15 per cent of the humectant will make the cream feel excessively moist on the skin. In Vasic's opinion, there is only one solution to prevent this drying in the jar; namely, the use of completely airtight closures.

Discoloration on standing, such as occurs when triethanolamine is used as the saponifying agent, may be prevented if the cream is protected from exposure to light, and special precaution during the process of manufacturing is taken, such as complete absence of metallic contamination, especially iron.

Discoloration of the cream may also be caused by the presence of ingredients in the perfume which discolor in the alkaline medium. Such ingredients are indol, methyl anthranilate, eugenol, isoeugenol, skatole, ethyl vanillin, citral, condensation products of methyl anthranilate and quinolines in association with musk xylol should be avoided in the compounding of a perfume intended for vanishing cream perfuming. Methyl methylanthranilate, anisic aldehyde, bromstyrole, methyl eugenol and methyl isoeugenol also discolor in an alkaline medium. Vasic also points out that vanishing cream is a kind of soap and the perfume must, therefore, be stable in an alkaline medium.

Neutral Emollient Basic Lotion

A neutral, emollient basic lotion, that serves as a vehicle for various medicaments, has been developed by S. W. Becker, Jr. and G. J. Gruber (*Bull. Am. Soc. Hosp. Pharm.* 11:107, 1954). Meeting certain rigid standards set up by these workers, this lotion is made from:

Glyceryl monostearate	**2.0 Gm.**
Spermaceti	**1.0 Gm.**
Carbowax 400	**2.0 cc.**
Olive oil	**5.0 cc.**
Sodium lauryl sulfate	**0.4 Gm.**
Gelatin	**0.3 Gm.**
Distilled water, to make	**100.0 cc.**

ATLAS chem-memos

CHEMICALS DEPARTMENT
Atlas Powder Company
Wilmington 99, Delaware

Atlas Powder Co., Canada, Ltd.
Brantford, Canada

HLB System speeds choice of effective surfactants

The table below is one of several tools of the Atlas HLB System, designed to assist you in your choice of surfactants. This table immediately guides you toward trial of agents most likely to work satisfactorily.

An HLB number has been assigned to each Atlas surfactant, representing the Hydrophile-Lipophile Balance of the agent (its affinity for oil or water). We have also set up tables showing the HLB ranges of surfactants which will give optimum emulsification (1) with common cosmetic ingredients and (2) in various applications, as shown in this table. Any desired HLB of surfactant can easily be obtained by blending.

For details on the HLB System, write for a copy of "A Guide to Cosmetic and Pharmaceutical Formulation," using your company letterhead.

Application	*Suggested Atlas Surfactants*	*Favorable HLB Range*
COSMETICS		
Creams, All-purpose, O/W	Lanolin derivatives; beeswax derivatives with Arlacel® or Tween® emulsifiers; Arlacel-Tween blends.	6–15
Creams, Anti-perspirant	Myrj® 52 blend with G-2162; Myrj 59.	14–17
Creams, Cold, O/W	Beeswax derivatives alone or with Tween emulsifiers; lanolin derivatives.	7–15
Creams, Cold, W/O	Arlacel 83; oleates.	3–6
Creams, Emollient, O/W	Arlacel—Tween blends; lanolin derivatives; beeswax derivatives.	7–15
Creams, Emollient, W/O	Arlacel 83 alone or blended with lanolin derivatives; oleates.	3–6
Creams, Stearic Acid	Arlacel—Tween blends; stearates, palmitates.	6–10
Lotions, Hand	Arlacel—Tween blends; beeswax derivatives; stearates, oleates.	10–14
Hairdressings, O/W	Arlacel—Tween blends; lanolin derivative.	7–15
Hairdressings, W/O	Arlacel 83; oleates.	3–6
Shampoos, Non-foaming	Renex® 20; Tween 80; G-7596-J; lanolin derivatives (as hair conditioners).	13–15
EMULSIONS, O/W		
Oils, Essential	Laurates, stearates, oleates.	9–16
Oils, Mineral	Span® 40 blended with Tween 40; laurates, stearates, oleates.	9–16
EMULSIONS, W/O	Oleates.	3–6
SOLUBILIZING		
Essential Oil (flavor and perfume)	Tween 20, Tween 60, Tween 80.	15–18
Vitamin Oil	Tween 20, Tween 60, Tween 80.	15–18

Formulating with Atlas Lanolin Derivatives

Increasingly widespread usage of lanolin in cosmetic preparations has been materially assisted by the development of water dispersible lanolin derivatives, which overcome many of the application problems of lanolin itself.

While retaining the beneficial emollient effects of lanolin, these Atlas-manufactured derivatives are considerably easier to use. They are applicable to oil-in-water emulsification, and can also be used as auxiliary emulsifiers in water-in-oil emulsions. They are made by reacting lanolin with polyoxyethylene sorbitol. Their solubilities range from water-dispersible to water-soluble (producing transparent emulsions). They may be used with either ionic or nonionic emulsifiers.

A number of other lanolin derivatives are available from Atlas. When properly used in formulas, these are applicable to such diversified products as cold creams, emollient creams, facial creams, hair dressings, and liquid hand soaps. Write to Atlas for samples and for technical assistance in application.

The waxes and oil are combined and melted on a water bath. The sodium lauryl sulfate and gelatin are dissolved in 85 cc. of distilled water and the resulting solution is heated to 75° C. The melted wax-oil mixture is added to the hot water phase with constant stirring. Cool, with constant stirring, to room temperature. The emulsion is an oil-in-water variety and a preliminary study of particle size discloses a range of from 3 to 25 microns in diameter. The *p*H is between 7.8 and 7.09 at 20° C.

When two drops of oil of rose geranium and amaranth are added to 100 cc. of this base lotion a cosmetically-pleasing, nongreasy, water-soluble hand lotion is produced. Addition of 10 per cent or more of olive oil provides a general body lubricant. From 0.5 to one per cent of menthol is incorporated for an antipruritic effect.

The addition of five per cent of liquor carbonis detergens and one per cent of resorcinol to the base lotion results in a product which has proven effective for the treatment of cradle cap and sebhorrheic dermatitis. To make an antibiotic lotion, one 500-milligram neomycin tablet is crushed and mixed with ten ounces of base lotion in a Waring blender. The final preparation occupies 12 fluid ounces because of the incorporated air. Among other substances successfully incorporated in this emollient lotion in various percentages are: Estrogens in oil, resorcinol, salicylic acid, vitamin A, water soluble hormones, and cycloform.

Tooth paste Ingredients

In his discussion of tooth pastes, J. R. Gwilt (*Perf. & Essent. Oil Rec.* 45:87, 1954) states that, clinically, the most important requirement of such a product is that it should clean the teeth effectively without scratching. From the sales point of view, the flavor should be adequate and acceptable, and this is best investigated by means of small-scale marketing trials. One point that may be overlooked is possible toxicity. Normally, negligible amounts of a tooth paste are swallowed, but an attractive flavor may encourage a small child to eat the paste. It is therefore desirable that even the largest trade size should have no toxic effect when the entire contents are eaten by a child.

While indicating the broad lines on which tooth pastes are generally formulated, Gwilt observes that the various commonly-used ingredients fall into a number of functional classes. Thus, polishing agents play the main part in removing debris and discoloration from the teeth. The most usual polishing agent is precipitated chalk, in which the sizes and shapes of the particles are controlled during manufacture to ensure constant physical properties and absence of scratching. More recently, dicalcium phosphate has come into use, but is comparatively expensive. The majority of the particles of polishing agents are less than 5 microns in diameter.

Detergents reinforce the action of the polishing agents both by emulsifying films of mucus and by wetting the teeth and the particles of debris in the mouth. For many years, special grades of hard soap were used, but the modern tendency is to use synthetic detergents, and sodium lauryl sulfate is most suitable. The latter compound was until recently protected by patents in certain foreign countries, and esters of sodium sulfosuccinate were used instead; these, however, are not always stable at a pH above 8.5. Sodium sulfo-ricinoleate has also found a limited application.

Excipients confer fluidity on the preparation. They usually have humectant properties, and the compound of choice is therefore glycerine though propylene glycol is quite widely used. Other glycols are suspect on grounds of possible toxicity. Sorbitol has also been used for many years in the United States. It is cheaper than glycerine, but pastes containing sorbitol may tend to dry out rather more readily.

Binding agents are generally necessary to prevent separation in the paste, particularly on aging. Bentonite gels are very stable, but tend to cause a grey color in the paste and impurities may scratch the teeth. The remaining binding agents in common use are mostly natural or modified polysaccharides. The original binding agent, which is still in wide use, is starch, which is generally employed as a glycerite. Methyl cellulose derivatives have the advantage of being detergent builders under certain conditions, thus enhancing foam formation. The various natural gums all have certain drawbacks. Thus, tragacanth gels tend to thicken and become stringy on aging, while karaya gels on the other hand become thinner. Acacia (gum arabic) has no application in this field. Use of sodium silicate as a corrosion inhibitor may lead to a comparatively high alkalinity in the finished paste, and this restricts the choice of binding agents. Thus, pectin, Carob bean (locust bean gum), and certain alginates tend to depolymerize above a pH of 8-9. However, modified Irish moss extracts are generally stable under these conditions.

Flavoring agents, says Gwilt, probably comprise the most effective single factor in selling tooth paste. However, the selection of essential oils for this purpose presents some difficulty. Prefences for flavors vary widely, but English flavors have been traditionally based on peppermint and American flavors on spearmint. Sweetening is necessary to round off the flavor and saccharin is almost invariably used. While experience is of great value in the preliminary selection of an oil or blend of oils, the final test of stability is to incorporate the flavoring material in the paste and re-examine the product at intervals over a period of weeks or even months.

The detailed manufacturing procedure necessarily varies with the formula of the tooth paste and with the equipment available. In general, however, the binding agents are dispersed in the excipient and the detergent added, followed by any water needed to adjust the final viscosity. The powders are mixed in, and the flavoring oils added last. Conventional pony or can mixers are frequently used, but the thicker pastes, particularly those with a high gum content, require a heavy-duty mixer such as the types used for poultices or bread doughs. It is desirable to mill the final paste after mixing. This breaks down any aggregates and reduces any tendency for the paste to harden on aging. Various types of equipment are used—ointment mills, triple-roll mills, colloid mills, or even simple gear-pumps.

Gwilt notes that, since the war, three basic types of toothpaste have been introduced into the United States and subsequently into England and other countries. In 1949, the ammoniated dentifrices, containing urea and dibasic ammonium phosphate, were introduced. In 1951, these preparations were swept away by the chlorophyll toothpastes. The latest approach, appearing late in 1953, is by way of the anti-enzymes. In Gwilt's opinion, there is no good reason at this stage to suppose that any of these recent trends in toothpaste "fashions" show marked clinical advantages over established formulae.

Animal Health

Emetine for Sheep Lungworm

Citing a preliminary report by Durbin, it is noted in *Veterinary Medicine* for May, 1954 that the intramuscular administration of emetine hydrochloride has given encouraging results in the treatment of lungworms (*Mullerius capillaris*) in sheep. In the project, the diagnosis of lungworm infestation was based on the presence of the larvae of *M. capillaris* in feces. The intramuscular dosage (Turunova method) is 0.3 cc. of a one per cent aqueous solution of emetine hydrochloride (emitine is the alkaloid of ipecac, and the hydrochloride is its salt) per kg. of body weight (0.15 cc. per pound of body weight). The dose was repeated two days later. Within one or two weeks after treatment, feces were free from lungworm larvae and continued so for a period of five months' observation. Clinical improvement was noted in all treated animals.

Keratoconjunctivitis of Cattle

Infectious keratoconjunctivitis or "pinkeyes," says S. L. Jackson (*Vet. Med.* 49:260, 1954) is an important disease hazard in beef and dairy cattle. It is characterized by an acute to chronic inflammation of the eye and affects cattle of all ages and breeds. Corneal opacities and ulcerations may appear quite suddenly. Pinkeye is painful and, because of resulting photophobia, affected animals keep lids closed in sunlight. Impaired vision, persistent lacrimation, and peripheral corneal vascularization also are usually present. Infectious keratoconjunctivitis is transmitted readily from animal to animal by direct contact.

Hemophilus bovis, the responsible organism, has been found susceptible to chloramphenicol (Chloromycetin) in rather low concentration. On the basis of this knowledge, field investigation of a one per cent chloramphenical ophthalmic ointment was started by Jackson. He found that this antibiotic ointment gave excellent results in 110 Hereford calves when applied freely once daily. Adequate restraint is necessary so that the ointment may be thoroughly dispersed over the eye by massage. Ordinarily, recovery resulted following three to nine days' treatment. All animals should be placed in dark quarters during treatment. No visible signs of toxicity were noted.

Rumen Concentrates

According to R. A. Silken (*Manuf. Chem.* 25:194, 1954), increasing appreciation of the role of rumen bacteria in the nutrition of farm animals has led to the development in the United States of purified rumen concentrates for administration to animals suffering from rumen dysfunction. These concentrates are preparations of viable microorganisms obtained from the rumens of freshly-killed adult cattle.

There are four types of rumen culture material available for the treatment of disorders of the rumen of cattle: (1) Cud—the food which ruminating animals return to the mouth. It is rich in micro-organisms. (2) Natural rumen content, dried. This material has an objectionable odor. (3) Concentrated rumen content derived exclusively from a cultured source. The liquid raw material is pumped from the rumens of 12 to 24 living animals; the odor is unpleasant. (4) Concentrated rumen derived from a mixture of natural and cultured rumen concentrate. About 750 to 1,000 rumens from freshly slaughtered adult cattle are used for the manufacture of each lot of the product sold in the U.S.A. under various trade names. The rumen material is purified, processed in such a manner as to remove objectionable odors, and dried on a suitable base; this makes it a more wholesome material for veterinary use. As a result of its being a mixture of a natural and cultured concentrate, it has the advantage of the maximum varieties of rumen bacteria and also of those varieties which induce more rapid responses. Each lot is assayed on guinea-pigs to confirm non-pathogenicity; it is also clinically tested on ruminants suffering from rumen dysfunction. Thus, a product is made available to the pharmaceutical industry in guaranteed strengths of from two to 16 billion micro-organisms per Gm. The rumen concentrate may be given on feed, in milk or water, or placed on the tongue of the animal in doses of one to two teaspoonfuls or tablespoonfuls, depending on the concentration of the preparation; or it may be administered with a balling gun if the rumen concentrate is available in the form of large tablets.

The rumen concentrates now commercially available have already proved themselves indispensable for treating the dysfunction of the rumen of adult animals which are suffering from a lack of viable micro-organisms because of milk fever, ketosis, mastitis, bloat, shipping fever, toxemia, and other diseases or because of medication. It is also an aid in correcting rumen dysfunction associated with lack of appetite (anorexia), preventing simple types of diarrhea, and helping in the production of healthier animals.

A subnormal number of bacteria in the rumen of the bovine will produce a nutritional breakdown in the cow. If the normal bacterial flora is not present, the bovine rumen does not operate and the animal cannot maintain a normal condition, due to the lack of digestible or absorbable food material. The animal suffers from this lack, thus showing nutritional deficiencies with complicating diseases appearing. By replacing the normal bacterial flora of the rumen, digestion is aided, the ruminant again obtains the necessary sugars, protein, and the like, and thus is able to return to a normal condition.

Detergent and Chick Growth

It has been shown in work reported in 1949 that quaternary ammonium compounds fed to broilers promoted increased gains in weight. Whether this effect was related to either the surface-active or the antibiotic properties of the compounds was not demonstrated. In order to determine the action of other types of surface-active agents, L. F. Ney and G. W. Newell (*Poultry Sci.* 33: 297, 1954) undertook experiments to

study the effect on weight gain and feed utilization of a commercial sodium alkyl aryl sulfonate detergent. Aureomycin, penicillin, and phenylarsonic acid supplements were included in this study for comparison.

They found that the addition of a commercial sodium alkyl aryl sulfonate detergent to the diet of a meat-producing breed of chickens, at levels of 0.5, 1.0, and 2.0 Gm. of active material per kilogram of diet, resulted in greater weight gains over a 12-week experimental period than were made by controls on an unsupplemented basal diet. Supplements of antibiotic fermentation residues showed greater effects during the first four weeks, but were equalled by the detergent supplements over the full term of the experiment. On a practical commercial type ration containing approximately 19 per cent protein, increased final live weights were obtained with accompanying improvement in the feed conversion ratio.

Antibiotics in Animal Diets

In the opinion of M. Welsh and L. B. Tennison (*Vet. Med.* 49:191, 1954) the use of antibiotics in the diets of animals is perhaps the most significant advance in the science of animal nutrition of this century. Apart from improved growth efficiency and economic returns, its use has opened entirely new vistas of research and understanding. It has brought the physiologist, biochemist, pathologist, veterinarian, and nutritionist into a common conclave of cooperation and mutual interest.

Welsh and Tennison believe that antibiotics are now a solid component of animal rations; they will remain an important adjunct of the feed industry. Their action is clearly one of disease control, by reduction of incipient infection, be it of high (clinical) or low (subclinical) degree. For this reason, the wider the spectrum of the antibiotic, the more likely it will be effective over a wide range of farm conditions and usage. Such antibiotics have to be used at levels commensurate with the type and intensity of the infective agent they are intended to combat.

In poultry, high levels (50 to 100 Gm./ton) have proved effective in sustaining growth efficiency and economic returns in the face of serious infections (air-sac disease—CRD—blue comb, enteritis) of both growing and laying chickens and turkeys.

In swine, wide-spectrum antibiotics have been shown to be economic and efficient for creep feeds and milk replacers in young pigs, and as additives in fattening rations and diets of pregnant or lactating sows.

In ruminants, the wide-spectrum antibiotic aureomycin has been shown to enhance growth efficiency and reduce scours in young calves, and also to promote improved growth and lower costs in fattening steers and lambs.

Artificial Insemination of Poultry

According to a note in the 66th Annual Report of the Maryland Agricultural Experiment Station (Bulletin A-78), artificial insemination of turkeys has received considerable interest within the last few years, and when additional information about the storage of semen is available, it may be a useful technique for chickens. The information apparently most sorely needed concerns method of diluting and storing semen. The possibility of extending the usefulness of semen with antibiotics, hormones, and extenders was investigated. One of the most useful diluents found was whole milk to which either male or female hormone had been added. Terramycin increased the *in vitro* survival time of semen but appeared to be detrimental to the fertilizing capacity of semen held short periods of time. Under conditions of prolonged (eight hours) storage, the samples treated with Terramycin gave better fertility than the control samples.

The effect of pH on the survival time of spermatozoa and the time required to reduce a uniform amount of methylene blue was investigated in another phase of work. In general, a pH of about seven proved most desirable from the standpoint of survival time, but semen samples brought to a pH of six, seven, or eight produced about the same degree of fertility when artificially inseminated.

Terramycin for Infectious Keratitis

In the investigations made by G. E. Hawley (*North Am. Vet.* 35:507, 1954) a total of 1,121 cattle and 174 sheep were treated by eye implantation for infectious keratitis with Terramycin eye pellets.

The Terramycin eye pellet consists of a concentration of 5 mg. of oxytetracycline hydrochloride in crystalline form, 10,000 units of polymyxin B sulfate, and 1 mg. of tetracaine hydrochloride as the anesthetic. The pellets are 7/32 inch in diameter and tableted so as to adhere to the eyball without producing irritation. Stability tests indicate adequate retention of the antibiotics for two years.

Of the 1,295 animals studied in efficacy trials, no untoward effects were noted in any cases. Early infections were reported to be cured effectively by a single implantation. Laboratory data showed persistence of antibiotic activity in tear samples of treated animals for as long as 31 hours following implantation, at concentration level of 0.67 μg/cc., using a plate assay method. In safety tests conducted on this method of treatment, extreme dosage trials were run with up to 50 pellets (25 per eye) being implanted in the eyes of an animal, over a five-day period, with no untoward effects.

Neostigmine Methylsulfate for Equine Colic

It is pointed out by W. W. Garverick and G. W. Burch (*J. Am. Vet. Med. Assoc.* 124:472, 1954) that veterinarians who engage in equine practice are frequently called to treat intestinal stasis with tympany in horses. The condition may be complicated by impaction of the cecum or colon. In the studies conducted by these workers, Stiglyn, a solution containing 2 mg. of neostigmine methylsulfate per cubic centimeter, was injected subcutaneously in horses to gain information concerning its ability to cause evacuation of feces and gas in both normal animals and clinical cases of colic. A subcutaneous dose of 1 mg. of the drug per 100 pounds of body weight was found to be safe and effective for evacuating feces and gas in a series of more than 200 cases of equine colic. The dosage schedule does not interfere with the appetite or cause excessive salivation. Normal horses will eat at any time following the injection. Commonly, after the second or third stool passage, the feces are not formed and subsequent evacuations may be soft and watery. The injection can be repeated in two hours with safety. A few animals in this series were given mineral oil, water, and antiferments via a stomach tube, after the routine injection failed to abolish the symptoms of colic. Of special clinical interest, was the observation that not one of the sick animals treated with this drug showed any evidence that the medication aggravated or increased the pain. Overdosing, manifested by restlessness, purging, and salivation, is counteracted with atropine.

GUMS

(CRUDE, POWDERED)

ARABIC
GHATTI
KARAYA
(INDIAN)
LOCUST
(CAROB FLOUR)
TRAGACANTH

CASEIN
MENTHOL
(NATURAL CRYSTALS)
EGG ALBUMEN
BLOOD ALBUMEN
QUINCE SEED
JAPAN WAX

PAUL A.
DUNKEL
AND COMPANY, INC.
IMPORTERS AND EXPORTERS
26 JOURNAL SQ., JERSEY CITY 6, N. J.
JOurnal Sq. 3-6400
CHICAGO: 325 NO. WELLS ST. TEL. SU. 7-2462

REPRESENTATIVES:

CHICAGO: CLARENCE MORGAN, INC.
BOSTON: P. A. HOUGHTON, INC.
PHILADELPHIA: HARRY W. GAFFNEY
LOS ANGELES: C. H. OWINGS
ST. LOUIS: C. L. IORNS CO.

KOSTER KEUNEN

★

BEESWAX

U. S. P. Pure Sunbleached
U.S.P. Pure Yellow Refined

Office and Refinery: Sayville, N. Y.

MICRO-CRYSTALLINE PETROLEUM WAXES

OZOKERITE • SPECIAL WAX BLENDS • CERESINE

Ask for samples, prices and technical data

KOSTER KEUNEN • • • • SAYVILLE, N. Y.

PHONE: SAYVILLE 400

Only Emersol® Stearic Acids Give You

All FIVE Advantages at No Extra Cost!

Get Peak Performance in Your Products with...

Resistance to Rancidity! Give your products maximum protection against oxidation and the development of rancidity by using RANCIDITY-RESISTANT Emersol Stearic Acids. Their unusual stability, as illustrated by both oxygen absorption and peroxide value tests, offers *extra quality*, extra sales appeal for your products.

Color and Heat Stability! If your process involves prolonged heating or exposure to relatively high temperatures, the excellent *color* and *heat stability* of Emersol Stearic Acids can reflect in lighter colored products. Also, color darkening during storage of finished products is minimized. Since color many times is interpreted in terms of purity, this apparent higher quality of your products should mean greater sales... higher profits.

Consistent Composition! Maintain the appearance and performance of your products with the *controlled* composition of Emersol Stearic Acids. This is particularly true if you are using a crystalline grade, in which case a small variation can result in a major change of the melting point, hardness, shrinkage and texture of your product.

Uniformity! Adherence to very narrow specification limits assures the same performance, time after time. This is in terms of production performance, formulation uniformity, and end-product performance.

Highest Quality! No matter what grade you use, Emersol Stearic Acids are the highest quality available. For your high-quality products, get the best...get Emersol 132 Lily Stearic Acid!

These extras at no extra cost means that you get greater value when you buy Emersol Stearic Acids. Check these Stearic Acids in your products. Order a trial plant shipment today!

If you do not have a copy of "Emery's Solid Fatty Acids" or "Rapid Composition Analysis of Commercial Stearic Acids," mail coupon today!

Emery

Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio

New York • Philadelphia • Lowell, Mass. • Chicago • San Francisco
Cleveland Ecclestone Chemical Co., Detroit

Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles

Export: 5035 RCA Bldg., New York 20, New York

EMERY INDUSTRIES, INC.
Dept. D9 Carew Tower
Cincinnati 2, Ohio

Please send me ☐ Solid Fatty Acid Booklet
☐ Rapid Composition Analysis of Commercial Stearic Acids

Name..... *Title*.....

Company.....

Address.....

City..... *Zone*.... *State*.....

Perfumer's Shelf

Constituents of Mentha Timija

The constituents of *Mentha Timija* have been investigated by J. Sfiras (*Recherches*, No. 2:39, 1952 through *Chem. Abstr.* 48:3932, 1954). He found the constituents of the oil were 90 per cent ketones consisting of 85 to 88 per cent pulegone, two to three per cent *l*-menthone, approximately one per cent of isopulegone and traces of other ketones. The oil also contains two to three per cent of terpenes, including among others, limonene and *alpha*-pinene. The alcohols, present in one per cent concentration, consist of free and esterified borneol and 1-octen-3-ol and its acetate.

Action of Perfumes on Termites

The insecticidal action of various perfumes on termites has been studied by T. Tu (*Formosan Sci.* 6:17, 1953, through *Chem. Abstr.* 48:4170, 1954). He determined the time, in seconds, in which ten workers of *Odontolermes Formosanus* survived the effects of the following agents:

	Seconds
Cinnamaldehyde	18
Cinnamic alcohol	27
Eugenol	29
Yellow camphor oil	45
Geraniol	49
White oil, B	60
Artificial eucalyptus oil	65
Citronella oil	75
Safrone	81
Brown oil	84
Linalool	85
Citronellal	100
Green oil	107
Ethyl alcohol, 96 per cent	105

Essential Oil Components as Anthelminthics

A study of the anthelminthic action of the components of essential oils has been made by G. Valette, R. Covier and J. Debelmas (*Ann. pharm. franc.* 11: 649, 1953). Tests *in vitro* were carried out with *Rhabditis macrocerca* and *Ascaris suum*, the total and the anterior segment of the parasite being used. *In vivo* tests were made with the oxyures of the white mouse. Carvacrol, eugenol, isoeugenol, cinnamic aldehyde, salicylic aldehyde, pinene, and geraniol were found to be active as anthelminthics.

Oil from Indian Vetiver Roots

It is pointed out by Sadgopol and K. Bhatia (*Indian Soap J.* 19:193, 1954) that the roots of the khus or vetiver grass yield an important essential oil known industrially as vetiver oil. The plant grows wild and luxuriantly in most parts of India. In India the roots are highly important for their pleasant odor resembling myrrh with a suggestion of orris, but the leaves are without any odor. Hence from the earliest times, all parts of the plant have been used either for the perfume, in religious rites, medically or for esthetic purposes. The roots are also used for aromatic baths, with sandal and other fragrant woods, for anointing the bodies. The most important use of the roots is for the distillation of vetiver oil either in its pure state or as an attar, a product of distillation obtained by condensing the volatile vapors from the roots into a base of either sandalwood oil or other cheaper solvent oils of vegetable and mineral origin kept in the receivers.

Vetiver oils from sources outside of India have been thoroughly studied for their physico-chemical properties and the data have been recorded by a number of authorities. However, such information is not available for vetiver oils of Indian origin. In order to remedy this condition and to provide authentic data for standardization of the Indian product, it was decided to determine the characteristics of the oil obtained from the roots in various production centers in India. The oils obtained by distillation from these authentic root specimens were examined according to standard methods and their physico-chemical properties were determined. Data were obtained for individual specimens and for mixed samples of wild roots. The properties of mixed samples of oils from wild roots from various areas are given in the table below.

Oil of Myoporum Crassifolium

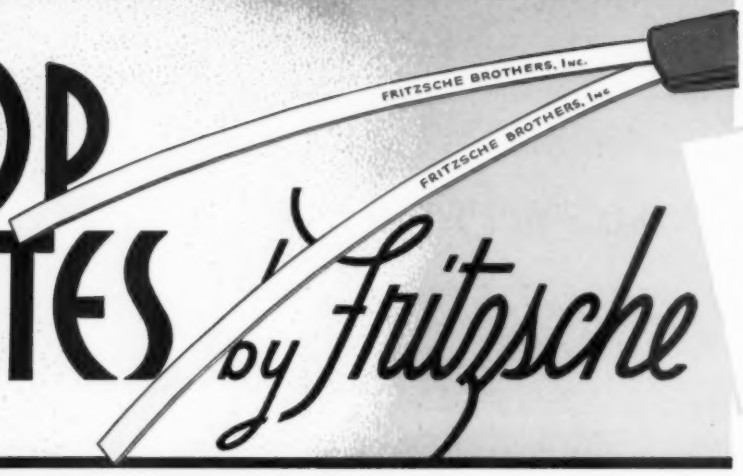
K. G. O'Brien, A. R. Penfold, and R. L. Werner (*Australian J. Chem.* 6:166, 1953) report that the essential oil of *Myoporum crassifolium* consists mainly of a tertiary sesquiterpene alcohol, isomeric with and possibly identical with synthetic bisabolol. The alcohol, $C_{15}H_{26}O$, boiling at 155° C., was isolated by fractionation of the oil obtained by steam distillation of the wood. It has the following characteristics.

Specific gravity	**0.9376**
Index of refraction	**1.4071**
Specific rotation	**—67.6°**

In the presence of platinum dioxide, the alcohol absorbs three moles of hydrogen, while dehydrogenation with platinum-carbon or -sulfur gives hydrocarbons which do not form picrates. With dry hydrochloric acid in anhydrous ether, the alcohol gives bisabolene3- hydrochloride, melting at 79 to 80° C., which was converted by sodium acetate in acetic acid into bisabolene.

Source	Physical state and aroma	Specific Gravity (30° C.)	Refractive Index (30° C.)	Optical Rotation (30° C.)	Acid value	Ester value	Ester value after acetylation	Solubility in absolute alcohol (25° C.)	Solubility in 80 per cent alcohol (25° C.)
Mixed roots I	Greenish brown, semi-viscous, pleasant khus note	1.0002 (25°C)	1.5012	—58.4°	16.0	23.3	196.6	in all parts up to 2 vols.	1:1
Mixed roots II	Reddish brown, light, khus note	1.0004	1.5170	—62.6°	16.7	25.2	200.0	—do—	do
Mixed roots III	Greenish brown, semi-viscous, pleasant khus note	0.9940	1.5082	—72.0°	21.5	22.2	175.0	—do—	do

TOP NOTES by Fritzsche



A THOU

"A man m

as oft as

FLOWER of the Month

August—Poppy or Gladiolus

September—Aster or Morning Glory

MAYBE YOU KNOW HIM . . .

THE name "Crouch" is one that has been long associated with the sales activities of Fritzsche Brothers in the middle and far western sections of the U. S. Today, BLAINE CROUCH, son of the still-very-active Stanley, is creditably upholding company tradition and family reputation by his capable selling of *service* in those parts of Illinois, Iowa and Michigan which constitute his sales bailiwick. Blaine was born in Kansas City, Mo., but having spent most of his formative years in Southern California and having graduated from the university bearing that name, he is understandably inclined to consider California as his "home." Prior to joining Fritzsche Brothers in August 1948 he had attended the Hines School of Pharmacy in Chicago and had done a stint of copywriting for a local agency. He was a B 17 Aerial Gunner during W.W. II and had many completed missions to his credit by the conflict's end. Now, with general sports and particularly golf as his hobbies, a lovely wife, Marilyn, and two children—Jeanne, 3, and Stanley, 1—and a home a-building in one of Chicago's attractive suburbs, Representative Crouch, the younger, expects to have enough interests to occupy all—and then some—of the off-duty hours that will be his between road trips and daily service to his customers.

RECOMMENDATION of the Month

Rose

having the f
of the living flower. It
by exceptional tenacity.
valuable component fo
compositions; small addi
toilet soap and cosmetic
at $35.00 lb., or $3.50

CHOOSING ODORS FOR CR

It is not the function of a cream, be it hand, face, massage, de
cream, to impart odor, but the fragrance associated with any in
has an important bearing upon its sales. The most acceptable
delicate in odor and must stand up well without change or discolo
with the stearates, alkalies and other ingredients in the formula
tested cream perfumes are guaranteed to give high perform
stability, odor quality, economy and customer satisfaction. We
us whenever you are in need of a finer fragrance for your crea

CREATORS of MADE-TO-ORDER FRA
for PERFUMES, TOILETRIES and C
•
ODORANTS and DEODORANTS for INDUSTRIAL and
•
SUPPLIERS of AROMATIC CHEMICA
PERFUME and FLAVOR RAW MA
•
FRITZSCHE Established
Brothers
PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW
BRANCH OFFICES and *STOCKS: Atlanta, Georgia, Boston, Massachusetts, *Chica
Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, Sa
St. Louis, Missouri, *Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.

A THOUGHT for the Month

"A man must make his opportunity, as oft as find it."

—FRANCIS BACON

Good Scents FOR PERFUMERS

A BOUQUET of BEAUTIES for CREAMS

This hand-picked selection of perfumes suitable for all types of creams, may include just the fragrance you have been seeking to give life and lift to your product's sales. For a practical test sampling of these fragrant beauties, use the coupon below.

Full, deep, rich rose odor; very stable.

A beautiful effect, highly reminiscent of the living flower.

A fresh rose effect . . . slightly "green" . . . good coverage.

An exceptionally fine reproduction of Persian lilac.

A strong lilac composition with characteristic "green" topnote.

A bright floral odor reminiscent of locust blossom.

A floral bouquet with a lilac motif and slight fruity topnote.

A floral bouquet with predominant magnolia note.

A deep full-bodied French type bouquet for tinted creams.

TRIAL OFFER: ½ oz. samples of any FIVE of these perfumes will be mailed to you, prepaid, upon receipt of coupon below, filled in and checked to indicate your selections and accompanied by check or money order for $2.00 to cover cost of packing and handling.

PLEASE USE THIS COUPON

FRITZSCHE BROTHERS, Inc.,
76 Ninth Ave., New York 11, N.Y.

Gentlemen: Attached is $2.00 (check or money order). Please send me, prepaid, ½ oz. bottles of each of the FIVE perfumes checked below:

NAME .....

TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

☐ ROSE—S-706	☐ LILAC—N-481	☐ BOUQUET—U-037
☐ ROSE—S-625	☐ LILAC—K-641	☐ BOUQUET—V-630
☐ ROSE—W-769	☐ BOUQUET—T-504	☐ BOUQUET—J-404

he Month

osetal

A rose specialty
having the fine full sweetness
e living flower. It is characterized
xceptional tenacity. ROSETAL is a
ble component for fine perfume
ositions; small additions will enrich
soap and cosmetic perfumes. Priced
5.00 lb., or $3.50 per trial ounce.

FOR CREAMS . . .

d, face, massage, deodorant or medicated
ociated with any individual cream usually
The most acceptable cream perfumes are
ut change or discoloration in combination
ents in the formulation. Fritzsche's shelf-
give high performance—the utmost in
r satisfaction. We invite you to consult
rance for your cream product.

-ORDER FRAGRANCES
RIES and COSMETICS
INDUSTRIAL and TECHNICAL USE
C CHEMICALS, BASIC
R RAW MATERIALS

Established 1871

others, Inc.

TH AVENUE, NEW YORK 11, N. Y.

*oston, Massachusetts, *Chicago, Illinois, Cincinnati, hiladelphia, Pennsylvania, San Francisco, California.*
FACTORY: *Clifton, N. J.*

WHO shall judge a fragrance? He who creates it or she by whom it may be worn? Is consumer testing the better guide to a perfume's desirability or should heavier reliance be upon the expert's knowledge of what constitutes a well-balanced, technically correct formulation . . . upon his ability to discern and cater to changing odor trends . . . upon his accuracy of judgment in selecting the most acceptable fragrances within a given price range for a specified purpose? While in the course of a perfume's development we may frequently invite the comments of others than our staff, it is primarily upon the good judgment of our experts that we rely for the final quality and character of our finished formulations. Laymen's opinions, while valued, are no substitute for the carefully formulated recommendations of our perfume specialists, who by training, experience and intimate knowledge of each problem handled are the ones best qualified to say: *THIS* is the fragrance for your product!

FRITZSCHE *Established* 1871 *Brothers, Inc.*

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St. Louis, Missouri, *Toronto, Canada and *Mexico, D. F.* FACTORY: *Clifton, N. J.*

. . . . building m
scribed—*regularly*
pleasant to take—a
course, that is the p
ceuticals good flavor
ceutical manufactur
patible flavor comb
laboratories are nov
houses. It is this typ
tend with.

For GOOD TASTE
in Pharmaceuticals

SEE WHAT THOSE GOOD-TASTING VITAMINS ARE DOING! . . .

. . building muscle, energy and good health—and all because you are taking them as pre-bed—*regularly* . . . . That's how *good flavor* helps the medicinal product—by making it *asant* to take—a welcome routine that even the most trying patient will not object to. Of rse, that is the purpose of flavor—to make it palatably appealing—and in the case of pharma-ticals good flavor is especially important because many of the basic ingredients used in pharma-tical manufacture are bad tasting to begin with. To help manufacturers select the most com-ible flavor combinations and to adapt them to their needs most effectively is the service our oratories are now rendering many of the country's best known ethical and proprietary drug ses. It is this type of service we'd like to render you if you have a difficult taste problem to con-l with.

GOOD TASTE
Pharmaceuticals *Consult* . . .

FRITZSCHE *Established* 1871
Brothers, Inc.

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* °STOCKS: *Atlanta, Georgia, Boston, Massachusetts, °Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, °Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St. Louis, Missouri, °Toronto, Canada and °Mexico, D. F.* FACTORY: *Clifton, N. J.*

NS

Lilac Perfumes

In discussing lilac perfumes, V. Vasic (*Mamuf. Chem.* 25:146, 1954) observes that there is no natural lilac absolute, and in the formulation of lilac perfumes a considerable variety of natural and synthetic materials are used. Terpineol, which on dilution closely resembles the scent of the flower, is used in most lilac perfumes, especially of the cheaper variety. However, the perfumer can create a great variety of compositions by skilfully employing a wide range of bases, blenders, modifiers, fixers, florals and aldehydes.

Thus, for the preparation of high-class lilac perfume, extracts of jasmin and tuberose varied with violet, rose, orange and jonquille and shaded with a little cassie serve as a base. Addition of small amounts of jasmin absolute, neroli and otto of rose and traces of hyacinth absolute underlines and reinforces the flowery note of the perfume. The small amounts of linalool, hydroxycitronellal, ylang-ylang and ionones help to enhance the floral note. Sometimes also traces of sweet orange oil are very useful. A small amount of cyclamen aldehyde will bring a fresh note and for this purpose bergamot oil can also be used. For imparting a sweet note coumarin, heliotropin and vanillin are used. For rounding off and developing warmth and body a very small amount of clove oil is useful, and a trace of benzaldehyde gives the final natural touch. All this is fixed with musk, benzoin and sometimes with ambergris.

For the less expensive lilac perfumes terpineol is the most popular base used in compounding. When diluted terpineol resembles lilac odor, but alone it is not sufficiently floral to represent the true lilac character. Excellent results can be obtained if terpineol is strengthened with a suitable floral backing in which some natural jasmin and tuberose are present. A combination of terpineol with hydroxycitronellal usually serves as a base for a lilac perfume. Hydroxycitronellal brings out the floral character, blends well and is a valuable fixative. The value of hydroxycitronellal is enhanced by the addition of linalool. Tuberose and jasmin natural absolutes, with otto of rose and traces of hyacinth, neroli and ylang-ylang, improves the floral note. Heliotropin and vanillin will sweeten and blend the floral note.

Vasic states that the addition of some synthetic aromatics is very useful in compounding lilac perfume. Dimethyl benzyl carbinol brings out a characteristic lilac note. It is a fixative of the first class, a very good blender and admirable for rounding off. To help the lasting power of the floral note the addition of phenyl propyl aldehyde is very useful. Phenyl propyl acetate is useful to add to the background of the composition where it will develop its bouquet. Phenyl methyl carbonyl acetate is used as a modifier of the floral bouquet, but it must be employed with great discretion. Cinnamyl alcohol, possessing a faint and pleasant hyacinth-like by-odor, apart from being an excellent base, tones down, fixes and rounds off the floral bouquet. For blending the floral character anisaldehyde, acetophenone and ionones are very useful. Benzaldehyde added in traces will strengthen the lasting power of the floral note. Benzylidene acetone and phenylacetic aldehyde, in small quantities, will act similarly to benzaldehyde. Benzyl acetate, benzyl propionate and *alpha*-amyl cinnamic aldehyde provide a note for the jasmin, and for variation of the tone methyl anthranilate is used instead of neroli oil and phenylethyl alcohol instead of otto of rose. Tuberose natural absolute can be replaced by *n*-dodecyl aldehyde (lauric aldehyde). Small amounts give the tuberose note and also impart and lift the freshness of the floral character of the composition. Musk ambrette and musk ketone are useful fixatives. A very good lilac perfume can be compounded using a very small amount of terpineol or even completely eliminating it. Such lilac perfumes, properly balanced, could have the full and true lilac note without sharpness of the perfumes overloaded with terpineol.

New Indian Essential Oils

In their report on the chemical examination of some new Indian essential oils, S. N. Gupta, G. Chandra and K. N. Nautiyal (*Perf. & Essent. Oil Rec.* 45: 80, 1954), observe that India abounds in a number of perfume-bearing flowers, some of which have not yet been worked out for their essential oils. A few of the flowers, such as Kadamb (Anthocephalus Cadamba), Harsinghar (Nyctanthes Arbortristes), moulsari (Mimusops Elengi) and Queen of Night (Cestrum Nocturnum) have been selected by these workers for further study. In the experimental work a weighed quantity of different flowers was distilled separately by the water distillation method. The perfumed vapors were absorbed in the solvent, *i.e.* purified benzene which was separated from the distillate and filtered, if necessary. The perfumed solvent was then distilled leaving behind the oil of the flower. The last traces of the solvent were removed under vacuum. Analysis of the attar obtained by the water distillation method provided the data in Table I.

Experiments were also made to extract the oils from the different flowers by the solvent extraction method using purified benzene at room temperature. The treated solvent was distilled later; leaving behind a viscous mass known as "concrete," which was steam distilled to get the oil. Analytical data for the concretes are in Table II.

Oil of Metrosideros Scandans

Distillation by A. J. Birch (*J. Chem. Soc.*, 1953, p. 715) of 50 cc. of the volatile oil of *Metrosideros scandans* and fractionation over sodium gave two fractions. The first fraction, 21 cc., boiled at 96° C. and had the following properties:

Specific gravity	**0.9202**
Specific rotation	**—22°**
Index of refraction	**1.5010**

The second fraction, in 6 cc. yield, boiled at 100 to 2° C. and had a specific rotation of −80°.

TABLE I

	Kadamb	*Moulsari*	*Harsinghar*	*Night Queen*
Optical rotation	0.9611	0 9594	0.9044	—
Refractive index	1.4840	1.4935	1.4825	1.4905
Specific gravity	—4.4°	4.4	2.4	—4.4
Acid value	13.4	64.5	8.2	18.9
Ester value	88.1	154.0	61.3	68.4
Ester value after acetylation	—	—	—	131.7
Solubility in absolute alcohol	1 vol.	1 vol.	1 vol. (with slight turbidity)	Soluble in equal vols.

TABLE II

Name of flower	*Melting point °C.*	*Congealing point °C.*	*Acid Value*	*Ester Value*
Harsinghar	33 °C.-34 °C.	30 °C.-31 °C.	23.5	38.19
Night Queen	48° -49°	44° -45°	44.75	106.8
Kadamb	57° -58°	52° -53°	6.8	113.5

No. 3 of a series

Gallo-Roman stele made from soft stone, considered by some authorities to be the patron goddess of pharmacy.

The Origin of FLAVORED MEDICINALS

Our 155th Year of Service

D&O ESTABLISHED 1798

In an attempt to make for greater palatability, many of the various dosage forms were developed by Greek and Roman pharmacists. One... a soft, semi-solid mixture of powdered drugs with honey syrup or sugared fruit juices, earned for the pharmacist of this period the name "Confectionarius". Both honey and fruit flavors remain important pharmaceutical masking ingredients, and the D&O Product Development Laboratories have made extensive use of these items in flavoring medicinals... particularly those designed for children. Manufacturers are invited to send samples of their unflavored material to D&O for individual testing.

DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

Sales offices in principal cities

ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • FLAVOR BASES • DRY SOLUBLE SEASONINGS

Abreast of the Markets

Shortages in Botanicals

Among the chief developments in the botanical market last month were the higher prices resulting from scarcities. A number of botanicals have been seriously affected by drought conditions in Europe, the most noteworthy ones being arnica flowers, chamomile flowers, elder flowers, ergot, henbane leaves, horehound herb, malva flowers, mullein flowers and black psyllium seed.

Ipecac Root Very Firm

European interests have bought up such large stocks of ipecac root, regardless of cost, that the price has now been driven up to $8 a pound. Very little material is available to the United States, and, with the next crop a long way off, there are no immediate prospects for improvement.

Orris Root Remains Tight

Because of the small amount of carry over from last year's crop of orris root, dealers have been looking to the current crop for improved market conditions. Up to the latter part of August, however, the price had remained high at 35 to 40 cents a pound, and there was not sign of any change. Consumers were limiting their purchases to small lots.

Saffron Becoming Scarce

Spanish saffron is so difficult to find on the spot market that some of the dealers are seeking to buy from each other through help of brokers. Although the item was still selling at $26 a pound last month, the price may soon be up near $30. Small amounts of saffron are reaching the spot market from the origin and at advanced prices.

Arnica Flowers Limited

A very limited supply of true Montana arnica flowers is available on the spot market, and this material is being sold in small amounts at prices as high as $2.30 and $2.50 a pound. At the same time, replacements from the origin are equaly as difficult to obtain, a condition which points to the probability that by the end of the year this item will be in a very difficult position.

Chamomile Flowers Scarce

Hungarian chamomile flowers have been seriously reduced in supply owing to the drought which has dried up the chief supply areas. The new crop of flowers will be much less than normal. Prices of the flowers, which were formally 55 cents a pound, have jumped to 75 and 80 cents.

Belladonna Leaves Up Steeply

The price of belladonna leaves advanced very suddenly last month at the producing area, although the item was still selling in the range between 45 and 50 cents.

Essential Oils Steady

Most of the essential oils remained in a stable position last month. Two exceptions include spearmint oil, which declined considerably because of a falling off in demand, and petitgrain oil, which advanced because of a limited supply.

Peppermint oil is much firmer in the country, but this change has not been reflected on the spot market yet.

Spearmint Oil Reduced

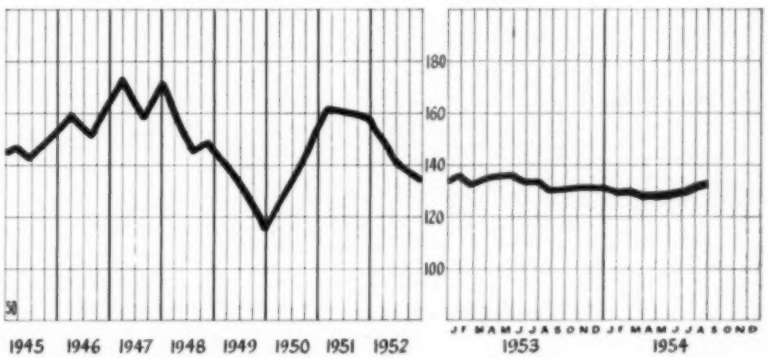
Spearmint oil, which in recent years has been used to a large extent in conjunction with chlorophyll products, last month dropped more than a dollar in price. The chief reason, according to spokesmen, is that the initial spurt of sales in the chlorophyll tooth pastes and other items has leveled off. By the same token, demand for spearmint has also leveled off. Farmers a few years ago increased their acreage of spearmint to meet this new demand, and are now faced with a surplus. Price of the oil last month ranged from $4 to $6.50 a pound.

Citronella Oil Supply Limited

There were no price changes in citronella oil last month; however, the market is expected to remain extremely tight for many months to come. The civil war in Guatemala has reduced that country's output of citronella oil to such a degree that it has become a negligible source of the item for this year. Outout of the oil in Ceylon has been reduced also. Citronella Oil has been selling at such a low figure that producers had become discouraged and cut down on their yields.

The world demand is such at the present time that it exceeds the available supply, hence the firm condition of the oil.

50 RAW MATERIALS—WEIGHTED PRICE INDEX. 1926 = 100.



The price index of fifty commodities for August advanced from 129.4 to 129.5.

have you tried

AMERCHOL®

LANOLIN CHOLESTEROLS in their most active form.

The Amerchols are safe, non-ionic, natural **EMULSIFIERS, PENETRANTS** and **EMOLLIENTS.** They will help you achieve superior cosmetic and pharmaceutical formulations by markedly improving stability, texture, appearance and effectiveness.

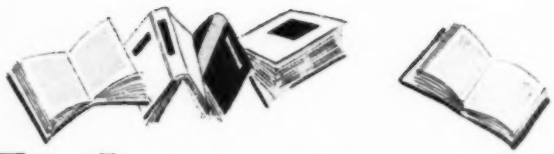
An Amerchol such as the multi-sterol, liquid Amerchol L-101 enhances softening, penetrating and spreading activity while holding desirable moisture to the skin. The surface active Amerchols function at the interface in oil-in-water emulsions to bring about these unique effects.

The Amerchols are ideal ointment bases since they are stable, induce rapid drug release, and promote optimum healing rates.

WE KNOW OF NO CASE OF AN ALLERGY DUE TO AN AMERCHOL.

AMERICAN CHOLESTEROL PRODUCTS
INCORPORATED
MILLTOWN • NEW JERSEY

Write on your business letterhead for technical literature and suggested formulas.



Industry's Books...

Handbook of Pest Control (Second Ed.), *by Arnold Mallis, Entomologist, Gulf Research & Development Co., 1068 pp., Illus., Mac Nair-Dorland Co., New York, (1954), cloth, Postpaid in U.S.A.* **$9.25,** *Postpaid elsewhere* **$9.75.** This new handbook of pest control is the latest reference volume dealing with household and industrial pests, insects, rodents, fungi, etc., their habits, identification, and latest methods and materials of control. The most complete work of its kind ever offered in a single volume it treats fully of rats, mice, other rodents, roaches, termites, bedbugs, moths, ants, lice, fleas, flies, mosquitoes, spiders, bees, wasps, mites, ticks, beetles and numerous other pests and the latest methods of chemicals used in their control.

Geriatric Medicine (Medical Care of Later Maturity), *Edited by Edward J. Stieglitz, M.S., M.D., Consulting Interneist, Suburban Hospital, Bethesda, Maryland, Third Ed., 205 Figures, 718 pp., J. B. Lippincott Co., Phila., (1954), cloth,* **$15.** This third edition about the growing field of geriatrics presents the knowledge and experience of many authorities which will help toward the understanding, proper diagnosis and treatment of aging patients. Much new material has been added, particularly in connection with the care and guidance of normal aging people and especially with the anticipation of disorders, their prevention or their early correction. The scope of the volume is broadened with the addition of two entirely new chapters dealing with geriatric nursing and the mental hygiene of later maturity. This book will help you apply modern clinical medicine for the prolongation of life, the extension of vigor, enthusiasm and usefulness of the aging patient.

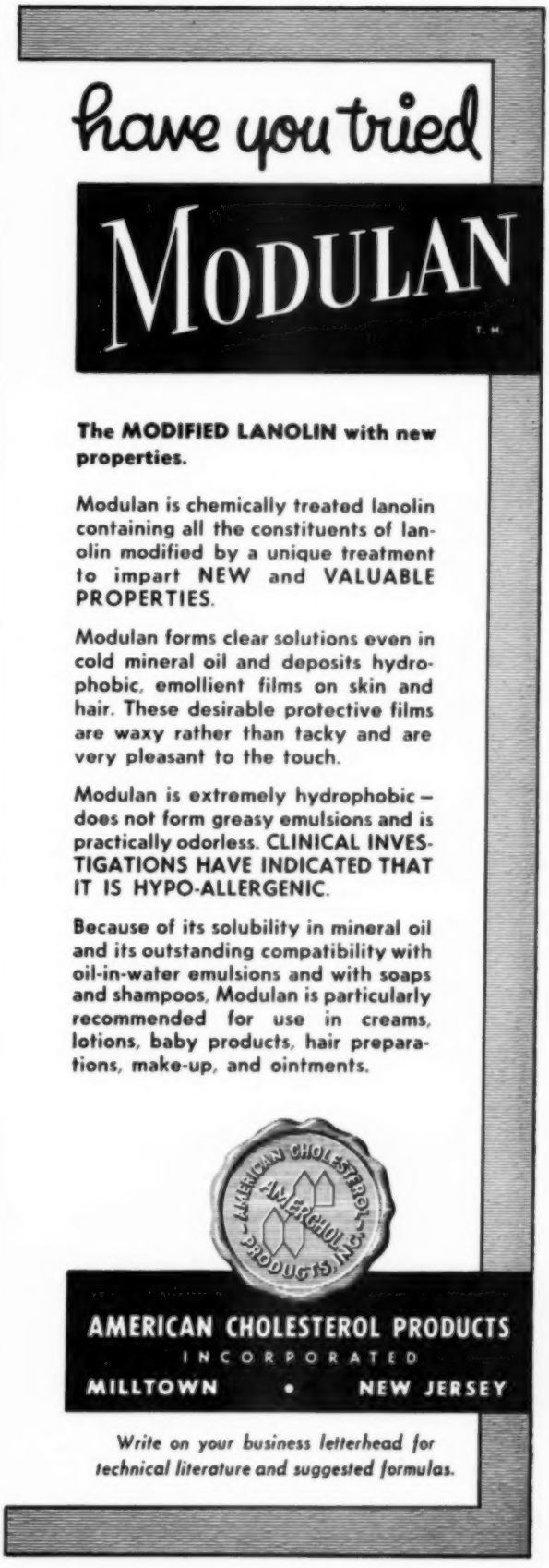
The Perfumery and Essential Oil Record (1954) Annual Directory & Buyers' Guide, *262 pp., Published by G. & M. Press Ltd., London, Cloth.* **30s.** A new edition of this well-known trade directory is always welcome in the States. It places in the hands of the American industry all the pertinent information relative to material suppliers in England. The First section of the review is devoted to the essential oils of the British Pharmacopoeia 1953 and British Pharmaceutical Codex 1949 and Supplement 1952. The Second

section is a Buyers' Guide to Essential Oils and Raw Materials. The Third main section is a Directory of Suppliers (Manufacturers, Agents, Etc.) for essential Oils and Aromatic Raw Materials. The Fourth section is a Guide to Suppliers of Plant, Equipment and Packaging. Fifth, the Dictionary of Perfumery Raw Materials is a revised and up-to-date edition of the dictionary of perfumery raw materials with an indication of their uses and applications. Statistical and technical data complete the work.

Victor Vito's Top Secrets of Hair Styling, *95 pp., Illus., Sudan Press, New York, (1954),* **$2.** Since the publication of Victor Vito's first book "Be Your Own Hair Stylist," there have been some interesting developments in hair styling which has prompted the author to write this second one. The aim of this book, of course, is to help every woman to deal with her own hair. The book is amply illustrated to show many examples of hairdos and there are complete instructions which are not complicated or technical.

Seventy-Five Years of Medical Progress (1878-1953), *Edited by Louis H. Bauer, M.D., Secretary-General, The World Medical Association, 286 pp., Lea & Febiger, Phila., (1954), cloth,* **$4.** The story of more than seven decades of continuing medical progress unfolds in graphic and inspiring sequence in this historically valuable work. The unique nature of the book is the result of the First Western Hemisphere Conference of the World Medical Association, held in Richmond, Va., April, 1953. Men of distinguished attainment in each of the 19 medical specialties, as well as a representative of general practice, were invited to contribute papers on the history and present status of their selected fields in medicine. This book is a carefully edited compilation of these papers.

Histopathology of the Skin, *by Walter F. Lever, M.D., Clinical Associate in Dermatology, Harvard Medical School. Second Ed., 518 pp., 281 Illustrations, J. B. Lippincott Co., Phila., (1954), cloth,* **$12.** In the five years since the first edition of this book, many advances have been made in the field of dermatopathology. These changes and their implications are discussed in this second edition. Important advances have been made in recent years in the histologic diagnosis of the vesicular and the bullous diseases, especially of pemphigus. Descriptions of these diseases have been entirely rewritten and brought together into a new, separate chapter. Because of changes in the concept of histogenesis of the nevus cell, the chapter on nevi and melanomas has also been rewritten. Extensive changes have been made in the descriptions of kraurosis vulvae, the purpurae and verrucae. Discussion of the following diseases has been incorporated because of recent interest in them—beryllium granuloma, papular myxedema, porphyria, ochronosis, hibernoma and hemangiopericytoma.


have you tried
MODULAN
T.M.
The MODIFIED LANOLIN with new properties.
Modulan is chemically treated lanolin containing all the constituents of lanolin modified by a unique treatment to impart NEW and VALUABLE PROPERTIES.
Modulan forms clear solutions even in cold mineral oil and deposits hydrophobic, emollient films on skin and hair. These desirable protective films are waxy rather than tacky and are very pleasant to the touch.
Modulan is extremely hydrophobic – does not form greasy emulsions and is practically odorless. CLINICAL INVESTIGATIONS HAVE INDICATED THAT IT IS HYPO-ALLERGENIC.
Because of its solubility in mineral oil and its outstanding compatibility with oil-in-water emulsions and with soaps and shampoos, Modulan is particularly recommended for use in creams, lotions, baby products, hair preparations, make-up, and ointments.
AMERICAN CHOLESTEROL PRODUCTS INC.
AMERCHOL
AMERICAN CHOLESTEROL PRODUCTS
INCORPORATED
MILLTOWN • NEW JERSEY
Write on your business letterhead for technical literature and suggested formulas.

CALL WH&C
for Raw Materials

Phone: CHelsea 3-6048

SESAME OIL, U.S.P.

PEANUT OIL, U.S.P.

FATTY ACIDS all grades

- ☐ LECITHIN
- ☐ LANOLIN
- ☐ CHLOROPHYLL
- ☐ CAUSTIC SODA
- ☐ CAUSTIC POTASH
- ☐ SODIUM CARBONATE
- ☐ ANHYDROUS SODIUM (Silicate of Soda)
- ☐ METASILICATE
- ☐ SODIUM ORTHOSILICATE
- ☐ STEARATE ACIDS—all grades
- ☐ FOAMING AGENTS
- ☐ SEQUESTERING AGENTS
- ☐ PHOSPHATES

Since 1838, headquarters for oils, fatty acids, detergents and specialties.

SINCE 1838

Warehouses in New York and Newark, N. J.

Welch, Holme & Clark Co., Inc.

439 WEST STREET NEW YORK 14, N Y

Readers' Questions

Insect Repellents: Kindly advise if you can supply a formula for a liquid insect repellent for application to the human body. We are looking for a preparation not containing ethylhexanediol. Thank you for any help you can give us. PASSAIC.

Government entomologists recommend the following as a useful insect repellent:

Dimethyl phthalate	**3 parts**
Indalone	**1 part**
Dimethyl carbate	**1 "**

Mixtures containing two repellents such as the following are also effective but do not repel as wide a range of insects or for as long a period as the triple mixtures:

Dimethyl phthalate	**2 parts**
Dimethyl carbate	**1 part**

Water-Soluble Suppositories: We are very interested in obtaining a formula for a water-soluble, rectal suppository which could be used for the relief of hemorrhoids. We would be very grateful for any information you could give us. CHICAGO.

The majority of such preparations are put up in cocoa butter bases. However, it is quite possible to medicate water-soluble bases so as to get beneficial effects in the hemorroidal area. Glycerinated gelatine of course, is much used as a vehicle for water-soluble or glycerine-soluble medicaments. This type of suppository does not melt at body temperature but slowly dissolves in the secretion of the mucous membranes to provide a continuous medicating action.

During the last few years, considerable interest has been shown in the use of polyethylene glycols (Carbowaxes). By varying the types of Carbowax, a suppository of the proper consistency and melting point can be obtained. If you wish to find further information on the use of these materials, I recommend that you read the article by H. W. Hassler and G. J. Sperandio, which appeared in the *Journal of the American Pharmaceutical Association*, Practical Pharmacy Edition, Vol. 14, page 26, January 1953. Most of the questions concerning the use of Carbowax compounds in the production of water-soluble suppositories are answered in this comprehensive review.

More recently, H. M. Gross and C. H. Becker (*J. Am. Pharm. Assoc.*, Scient. Ed. 42:498, 1953) have developed a new water-soluble, high melting-point suppository

base with a short time interval, high percentage medicinal release. This new base consists of polyoxyethylene 30 stearate, water, white wax, and Aerosol OT. A check of their report should be very informative.

Hair Tinting Stick: I hope you will assist me in securing the formula for a black cosmetic stick to tint grey hair. BOMBAY.

It is my impression that black sticks to tint grey hair do not materially differ from compositions used to make eyebrow pencils. Hence, a standard formula for an eyebrow pencil containing black pigments, can be cast into thicker molds, for hair tinting purposes. If desired, the hair tinting sticks can be made harder by incorporating a little more wax. As a guide, a typical eyebrow pencil base consists of:

Soft paraffin	**40.0 per cent**
Hard paraffin	**42.0 " "**
Color, as desired	**18.0 " "**

Denture Rebasing Compound: I was wondering if you would send me a few formulas for making plastic reliner for false teeth. Will appreciate this information. LOUISVILLE.

I regret I have no information on the use of plastic preparations for this purpose. However, the American Dental Association's official text states that for temporary rebasing of dentures, a preparation of the following composition has been suggested:

Powder:

Zinc oxide	**85.0 Gm.**
Rosin	**15.0 Gm.**

Liquid:

Clove oil	**60.0 cc.**
Canada balsam	**35.0 cc.**
Peruvian balsam	**5.0 cc.**

The powder is mixed with the liquid to a flowing consistency.

Oral Fat Emulsion: We read an article in your magazine (May) 1953 referring to some foodstuff made on the basis of an emulsified fat. Will you advise us concerning the materials and fats used in this product? BUENOS AIRES.

According to the original report, the emulsion used in the investigation consisted of 40 per cent peanut oil, 10 per cent sucrose or dextrose in water, and two per cent purified soybean phosphatide and 0.2 per cent synthetic emulsifier (alkylaryl-polyether alcohol) as stabilizers, with small amounts of a flavoring agent, and antioxidant and preservative.

Spins on—Seals—Spins off without freezing.

Merit SEAL outsells *all* others because its patented construction works better.

NOW AVAILABLE IN THE FOLLOWING NEW SIZES: **38, 40 and 45 mm.** Other Sizes—48, 51, 53, 58, 60, 63, 66, 70, 75, 83, 89 and 100 mm.

CROWN

CROWN CORK AND SEAL COMPANY INCORPORATED

SPECIALTY DIVISION ST. LOUIS 15, MISSOURI

INFRARED SPECTROSCOPY AND PERFUME MATERIALS

(*Continued from page 323*)

regeneration from the bisulfite compound which separates it from the noncombining gamma isomer. Figure 4 shows the spectra of the pure isomers prepared in this manner as well as of several synthetic mixtures of the two. The percentage of isomethyl ionone can be determined directly by the optical density at 7.8 and/or at 8.05 microns, at which points the normal isomer has practically no absorption, but the optical density of 1.5 requires use of a solvent and the necessity of making quantitative weighings.

It is, therefore, advisable to use another reference point. The absorption of the isomethyl ionone at 13.75 microns is of suitable intensity for quantitative measurements. The normal isomer has a maximum at 13.6 microns. This does not interfere with the use of this reference point provided the resolving power of the instrument is sufficient and its reproducibility is satisfactory at these higher wave lengths. Thus recent advances in instrumentation make this reference point usable obviating the necessity for using the less convenient shorter wave length.

Thus we see that the basic problem of analyzing a mixture which consists essentially of two compounds can be solved with more or less accuracy by the infrared method. Now let us see what can be done with a mixture containing one component in very small

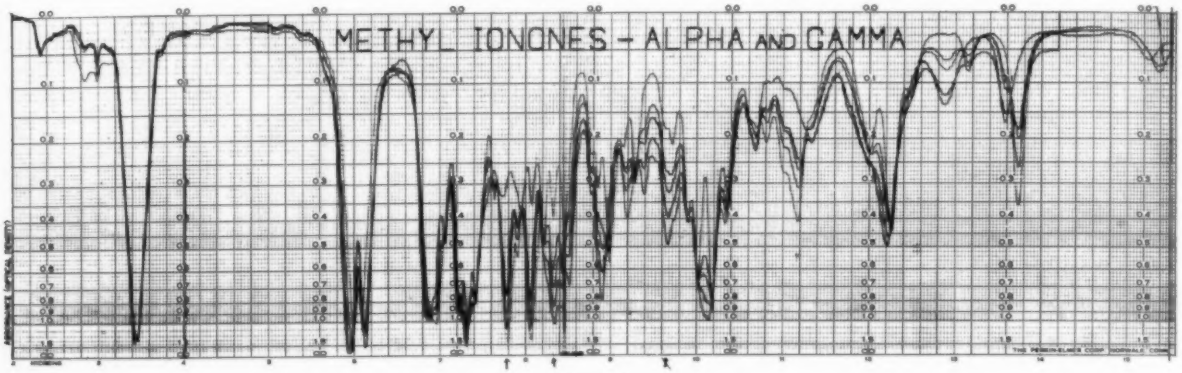


Figure 4

Plymouth Brand STEARATES

PLYMOUTH No. 220 ZINC STEARATE U. S. P.
PLYMOUTH No. 21 ZINC STEARATE U. S. P.
PLYMOUTH SPECIAL "A" ZINC STEARATE U. S. P.

These U. S. P. Zinc Stearates are produced from the highest quality natural, Saponified Process, Triple Pressed Stearic Acid. Control of process variables results in the production of three grades affording a subtle range in texture to meet any formulation requirement. All grades place emphasis on freedom from odor, storage stability and non-balling characteristics.

PLYMOUTH MAGNESIUM STEARATE No. 2

This Magnesium Stearate is designed specifically for use, when desired, in powder formulations and as a tabletting aid.

PLYMOUTH BRAND STEARATES also include:
Calcium, Barium, and Aluminum Stearates

M. W. PARSONS-PLYMOUTH, Inc.

59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.

Telephone BEekman 3-3162—3163—316
Cable Address: PARSONOILS, NEW YORK

A complete line of Cosmetic Raw Materials

amount only. It is in this particular field that the controversy of the relative value of spectra and nose has raged most violently. Three examples may shed some light on this question.

Figure 5 shows the effect of the addition of one per cent methyl nonyl acetaldehyde to a perfume oil. This addition is easily detected by the nose yet the spectrum fails to show any significant change by virtue of this adulteration. It is true that a differential method of analysis would serve to magnify any differences present, but at the moment we are concerned mainly with a straight comparison of the two spectra without the use of any refinements. In this case the nose is definitely superior.

Let us take another example illustrated in Figure 6. One per cent of "methyl heptine carbonate" added to the same perfume oil again changes the odor markedly and again the spectra although noticeably different, are not sufficiently so to render them an unequivocal proof of the adulteration. Here again the nose is the superior analytical tool.

Before we jump to the conclusion that the spectral method is inapplicable to cases where the contamination or adulteration is in small amount, let us examine Figure 7. The addition of one per cent citronella oil to the same perfume oil makes a marked change in the infrared spectrum. The absorption at 14 microns is sufficiently distinctive for quantitative or at least semi-quantitative determination of the citronella oil. It is true that the citronella oil can be detected by odor, but

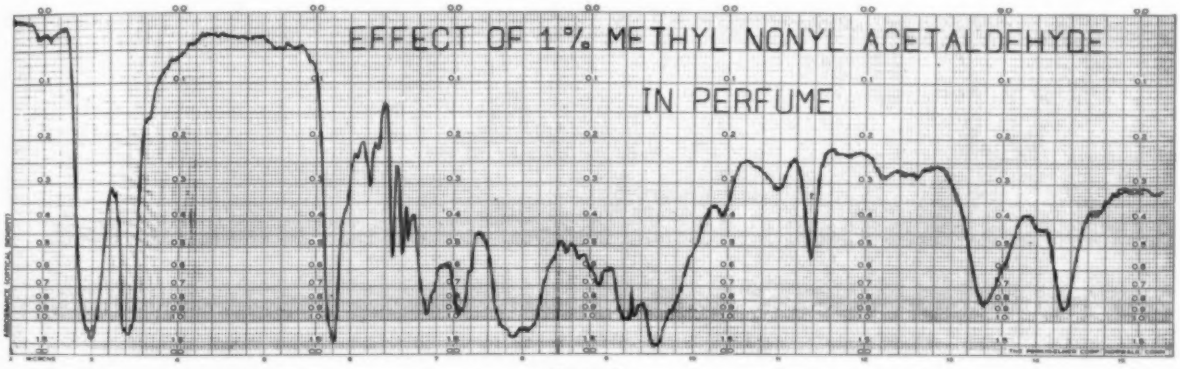
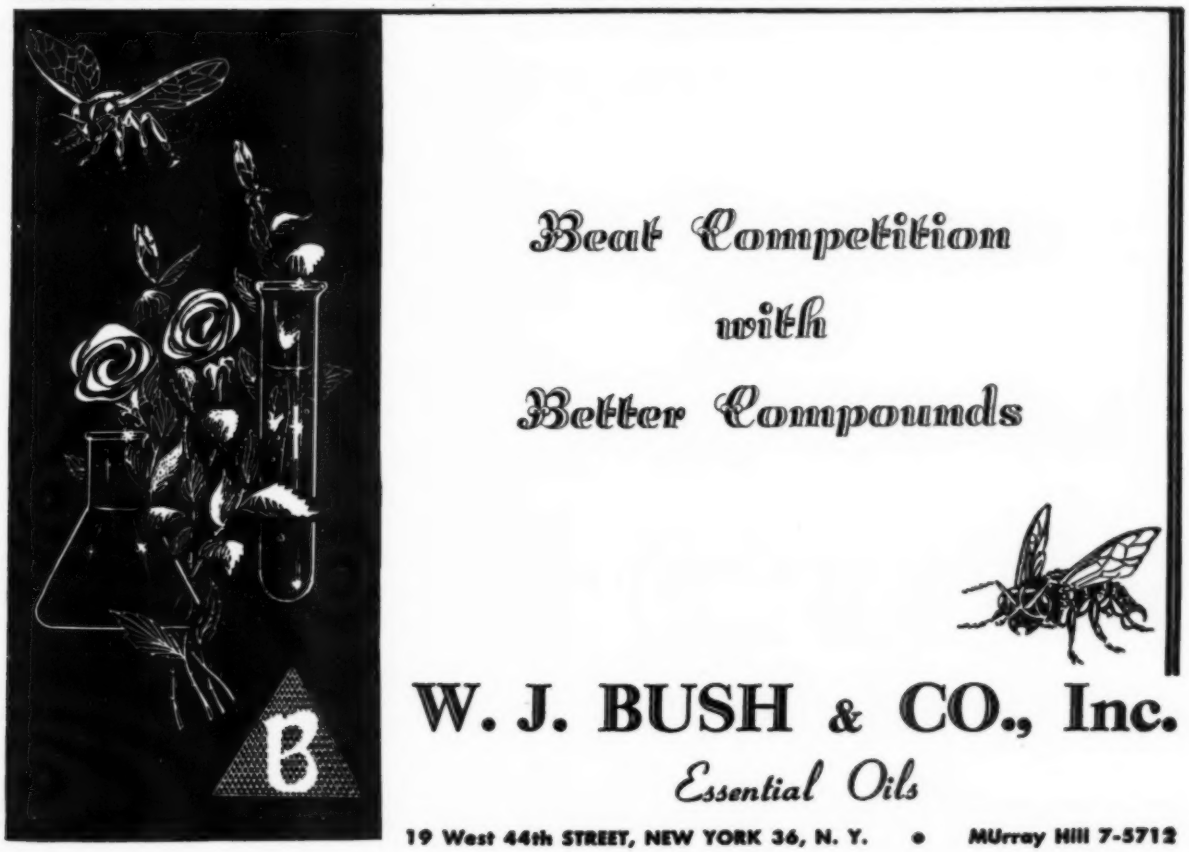


Figure 5


Beat Competition
with
Better Compounds
W. J. BUSH & CO., Inc.
Essential Oils
19 West 44th STREET, NEW YORK 36, N. Y. • MUrray Hill 7-5712

the spectral analysis is surely the more quantitative. If the adulterant had been odorless, or of slight odor strength, the spectrum would provide the only means of detection.

Thus we conclude that the preferred method of analysis depends on the intensity of the odor and the spectral absorption maxima of the material in question.

The above examples have illustrated the effect of certain additives to perfumes, but they do not constitute typical cases of practical significance, as in the following odor duplication experiment. Figure 8 shows the spectra of a perfume oil (labeled R) and of two "duplications." The first attempt was close in odor to the original as judged by a panel of perfumers. An examination of the spectra of the original vs. the first duplication was made available to the perfumer who was attempting the duplication. There are marked differences in the spectra in spite of the similarity in odor. For example, the absorption at 2.95 shows too much hydroxyl in the duplication and there is not enough absorption at 11.3. Also there are various other points of difference. An attempt to correct these deficiencies resulted in duplication No. 2, which showed improvements at the above points but caused greater distortion at other points, particularly in the region above 14 microns. To make the spectrum of a duplication coincide with that of the original regardless of whether the odor of the two could be considered interchangeable, is evidently a formidable task.

Consider the case of a complicated mixture contain-

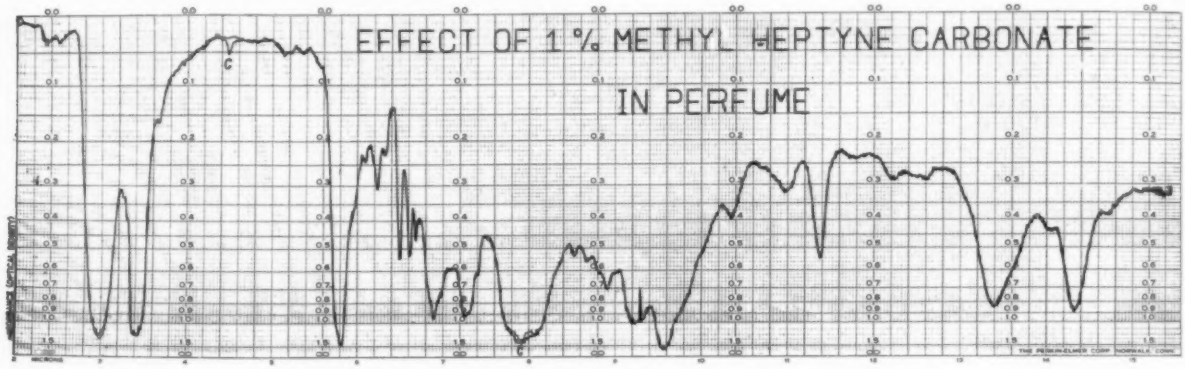


Figure 6

Synthesized Floral Absolutes
Superlative Perfume Essentials
Resinoids
Supreme Perfume Oils
Savon Doux Line
Soleauromes (Solub-Oils)
Floraquae
RICO
Solidaromes
F. RITTER & CO. UNIFORMITY QUALITY ESSENTIAL AROMATICS
Dr. Alexander Katz Co.
division of
F. RITTER & CO.
Los Angeles 39, California
Branch Offices in Principal Cities
Taste-Perfumes for Lipsticks
Essential Aromatics

PRIVATE FORMULA
Tablets and Capsules
BY THE THOUSANDS--- OR BY THE MILLIONS
your product accurately compounded
Over 39 years' experience enables us to render you prompt, accurate, and dependable service in the manufacture of your tablets and hard shell capsules. Our central location expedites delivery to any point in the country. Furnished bulk or packaged.
Vitamin Tablets and Capsules—Tablets—Ointments—Powders
We Invite Your Inquiries
Standard Pharmacal Co.
OF CHICAGO
PRIVATE FORMULA MANUFACTURERS
M. F. Charley, President
847-853 W. JACKSON BLVD. CHICAGO 7, ILL.

ing natural products as well as synthetics and made up at different times but each time according to the same formula. How will the spectra of the various batches compare? Figure 9 gives the spectra of four different batches of such a perfume "A." These four batches were made up at intervals of several months so that in many cases raw materials from different lots were used. Nevertheless and in spite of the slight differences, there is little doubt that each batch was made according to the same formulation, for the order of magnitude of the differences is entirely different from that of the previously shown perfume R and its duplications. A duplication without knowledge of the formula of a perfume containing many ingredients which will give a spectrum checking as closely with the original as is true for the Figure 9 batches, can be considered almost impossible from a practical standpoint. This particular perfume contains a preponderance of natural products which vary somewhat in constitution from batch to batch.

Figure 10 shows four batches of a different perfume "C," again made up at intervals of several months. This perfume contains mostly synthetics and here it is apparent that the coincidence of the spectra is even closer than in the case of Perfume "A." If the above cases are typical, as we shall attempt to prove by further study, it would seem that the infrared spectra can be used as a fingerprint as to the identity or authenticity of any perfume oil.

(Continued on page 401)

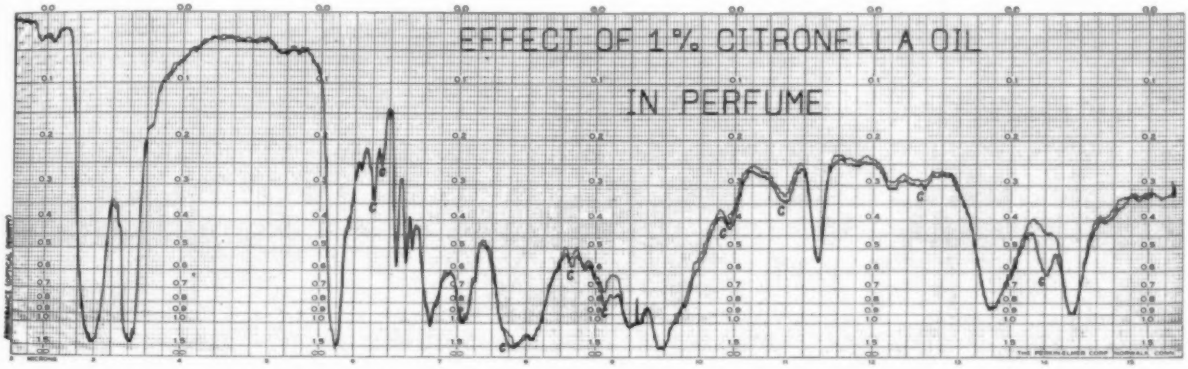


Figure 7

Coumarine
Rhodia

Sure... *It is expensive!*
But... *We are proud of it*
because it is so much better.
Yes, *it has the best fragrance*
and no by-odors. And who say so?
More *and more discriminating*
perfumers!

For complete information on Coumarine Rhodia, on Rhodia's line of fine synthetic oils, or help with any perfume problems, write or call Rhodia, Inc., Aromatic Chemicals Division, 230 Park Avenue, New York 17, N. Y., MU 9-7322.

Rhodia INC.
230 Park Avenue, New York 17, N. Y.

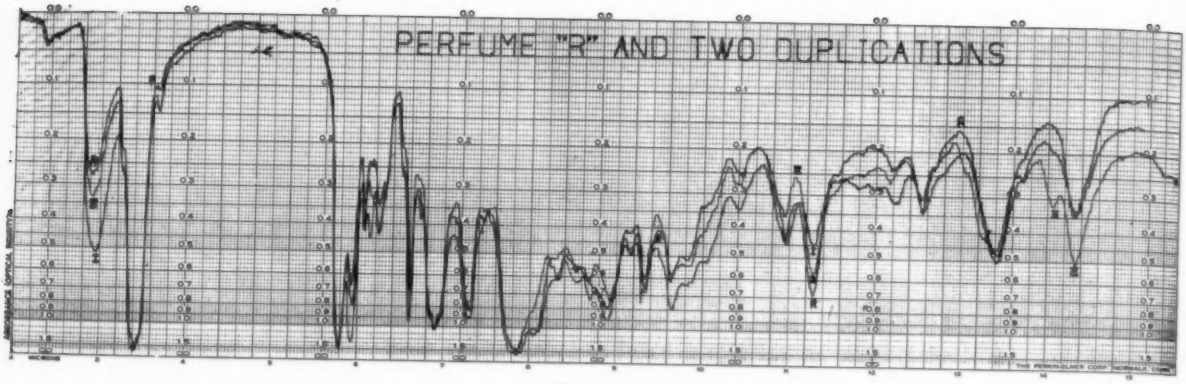


Figure 8

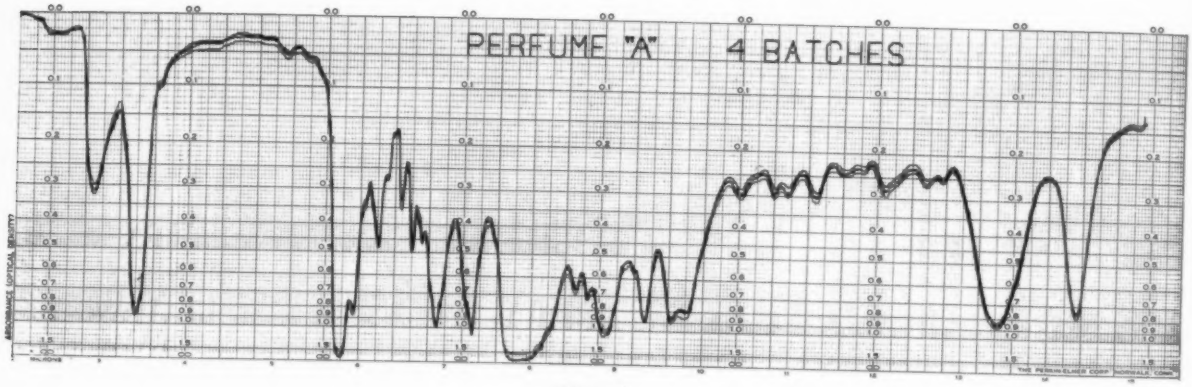


Figure 9

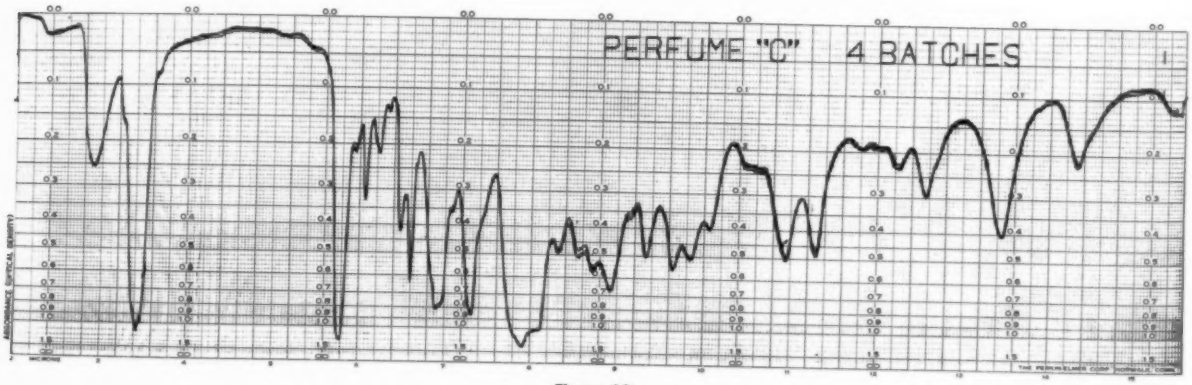


Figure 10

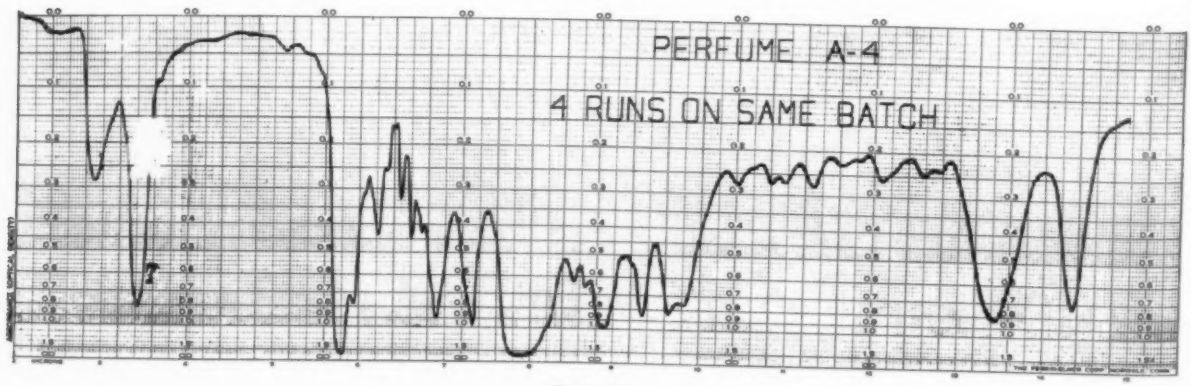


Figure 11

(*Continued from page 399*)

Finally Figure 11 shows the reproducibility of the instrument. The spectrum of the perfume oil "A" was run four times, each time using the same sample. The curves are, at least for practical purposes, identical.

These spectra were obtained on a Model 21, Perkin-Elmer double beam infrared spectrophotometer recording linear in wave length and percent transmission. The graphs were recorded on absorbance paper. Scanning time was 16 minutes for the entire spectrum, 0.025 mm. cells with sodium chloride windows were used throughout. The various materials were measured directly without solvent dilution.

We have discussed the value of the infrared spectrophotometer in several cases relating to the essential oil and aromatics chemicals industry. These cases constitute merely a preliminary survey and many more questions of an obvious nature remain to be answered. We hope to continue work along these lines in an effort to arrive at answers to as many of these questions as possible.

BIBLIOGRAPHY

1. Lundin, H. G., Crowder, M. L., and Taylor, W. A.: "Infrared Spectrophotometric Examination of Aromatic Chemicals," Sci.Sec. Toilet Goods Assoc., Nov. 18, Dec., 1952.
2. Wilks, Paul A.: "Infrared Analysis for Cosmetics." Amer. Perfumer, 62, 181 (Sept. 1953).
3. Presnell, A. K.: "Infrared Spectrophotometry of Essential Oils," J. Soc. Cosmetic Chem., 4, 101 (1953).
4. Hausdorff, Harry: J. of the Soc. of Cosmetic Chemists, 4, 251 (1953).
5. Naves, Yves Rene and Ardizio, Pierre: "Infrared Spectra of Geraniol and Nerol and Their Biphenylurethan Derivatives," Compt. rend. (June 16, 1952).

KEEPING PACE WITH THE ANTIHISTAMINES

(*Continued from page 314*)

use of an antihistamine was recommended as a routine procedure in blood transfusions. A similar suggestion was made by Frankel and Weidner[34] following the observation that addition of an antihistamine to blood decreased the frequency and severity of allergic and pyrogenic transfusion reactions.

Using a somewhat different technic, Bernhard and his associates[35] found that the subcutaneous administration of antihistamine 15 to 20 minutes before a blood transfusion lowered the all-over incidence of reactions by about one-half. In Europe, Catalano[36] reported that best results were obtained when the antihistamine was given 15 minutes after the transfusions.

It has been found that reactions from penicillin, streptomycin, sulfonamides, and other drugs are usually helped by the antihistaminic drugs.[37] The antihistamines may be administered orally or parenterally for this purpose. At present at least one preparation (Penicillin-PB2, Ciba) is available which combines an antihistamine with penicillin to minimize or prevent sensitivity reactions to the antibiotic. In addition to this physical mixture antihistamine salts of penicillin have been developed[38] with the same prophylactic action in mind.

In discussing the parenteral use of an antihistamine, Parish[24] states that its employment in combination with drugs to which patients have previously experi-

Give it Visibility in Modern

LUSTEROID

No need to hide your product in order to protect it.

Lusteroid vials and tubes provide the ideal package for many products today because these distinctive plastic containers display as well as protect through their crystal-clear walls that are strong, tough, unbreakable.

You'll like the economies made possible through Lusteroid's light weight, printability and low original cost.

Why not write for samples of these colorful containers now? They come in standard diameters from ¼" to 1½" and lengths up to 6". Cork, slip-on and screw-cap closures.

Find out today how you can s-t-r-e-t-c-h your packaging dollar with Lusteroid.

LUSTEROID

Lusteroid Container Company, Inc.
10 West Parker Avenue, Maplewood, New Jersey

KOMMON SCENTS!

Closeness of the major league baseball pennant races is attracting more attention than anything since "Flying Saucers." At the current writing, the Cleveland Indians and New York Giants are doing more to "break up" the Yankees and Dodgers than an efficiency expert with a sharp pencil.

• • •

Biggest individual hero of baseball seems to be the Giants' Willie Mays. If Mays is an example of Army pampering of athletes, all future spring training should be supervised by Selective Service.

• • •

Greatest heartache of the season, of course, was the "beaning" of Joe Adcock after he belted four home runs in a single game. It made fans wonder whether a bat is an instrument of skill or just a weapon of self-defense.

• • •

With a Giant pennant win most likely, Leo Durocher will get this season's laurel as a genius. In view of the several other names called Durocher, this will earn him a lifetime average of .125.

• • •

Happiest regain of form, of course, was Bobby Feller's. Although he's not striking out as many as he did in former years, he has maintained the basic principle of good pitching: Make sure the other team scores less runs than your own.

• • •

Most revealing event of the season was Bill Terry's humble acceptance speech after being elected to Baseball's Hall of Fame. The last time newspaper men remember Terry being on the verge of tears was when he feared his salary would be cut.

• • •

The Cosmetic Industry agrees with those fans who think the game prospers more when the new year presents new champions. In other words, everybody should get a chance; provided, of course, it doesn't interrupt a busy season.

George Fiedler

KELTON

Cosmetic Company

230 West 17th Street New York 11, N. Y.

Private Label Manufacturers Exclusively

Covered by Product Liability Insurance

enced either local or systemic reactions prevents the occurrence of these reactions in most cases. When 14 of his patients who had previously shown some reactions to penicillin were given the antibiotic plus the antihistamine no untoward effects appeared in this group.

Although there are those[1-39] who feel that the addition of an antihistamine to penicillin for parenteral administration will not prevent sensitivity reactions, there is growing evidence[40-41-42] that such combinations are of definite benefit. Simon,[43] for example, showed that when various antihistamines are added to penicillin, the reaction rate was materially reduced from an average of about five per cent to 0.72 per cent in 5,000 patients. When optimum amounts of the antihistamine were added to the penicillin, the figures were reduced even further; never rising above 0.5 per cent.

Other reports in the recent literature indicate that the use of an antihistamine in conjunction with various therapeutic substances and diagnostic agents is helpful in reducing the incidence of undesired reactions. Thus, the antihistamines have been of benefit in connection with the administration of vitamin B_{12},[28] tetanus antitoxin,[44] human albumin,[45] trypsin,[46-47] and contrast media for intravenous urography.[48]

In some instances, the employment of antihistamines has permitted the use of lifesaving drugs which might have had to be discontinued because of undesired reactions. Thus, through the use of antihistamines it has been possible to administer penicillin to a number of patients with subacute bacterial endocarditis who were ordinarily sensitive to this effective agent.[49-52]

In addition to their oral and parenteral administration, the antihistamines are often applied topically to provide local relief of symptoms. In the case of hay fever and other forms of allergic rhinitis, for example, antihistamine-containing nose drops and sprays provide relief of respiratory symptoms. Nonirritating antihistamines used as aerosols have also been helpful in some cases of asthma.[37]

An antihistamine may be combined with other drugs, such as cortisone, to yield an effective nasal preparation for treating allergic rhinitis,[53] or it may be the sole active ingredient of the nasal preparation. This is illustrated in the following formula[54] for making a 10-liter batch of a 0.5 per cent nasal solution of pyrilamine maleate:

Pyrilamine maleate	51.5 Gm.
Dextrose, U.S.P.	500.0 Gm.
Chlorobutanol anhydrous, U.S.P.	25.0 Gm.
Distilled water, to make	10,000.0 cc.

Heat about 6,000 cc. of distilled water to 80° to 90° C. Add the chlorobutanol and allow to cool with stirring until the chlorobutanol is dissolved. The dextrose and the pyrilamine are added and dissolved by stirring. Then add enough water to make a total volume of 10,000 cc. The solution is filtered through a Pyrex fritted glass filter (C porosity) and is then subdivided into half-ounce dropper bottles, previously washed and

dried. The bottles are capped with clean, dry dropper-cap assemblies.

As already mentioned, antihistamine nasal solutions are also being dispensed in plastic spray atomizers, and an increasing number of preparations are now being provided in this convenient package. Recent tests[57] with one of these products showed that a spray from such a nebulizer was highly satisfactory from the standpoint of self-administration and very effective with respect to relief obtained from nasal symptoms.

The value of antihistamines in the treatment of the common cold remains a controversial subject.[56] In the opinion of one group,[57] for example, these agents are of no value in the treatment of true colds. In contrast are the findings of Cronk and Marty[58] on the use of an antihistamine in the treatment of nonspecific upper respiratory infections. They found that more of the patients treated with this agent showed subjective improvement than did the controls; the differences being statistically reliable. Their data suggested that a significant proportion of "colds" involves allergies that respond favorably to the administration of an antihistamine.

Antihistamines are now becoming familiar components of cough syrups and expectorants. Apparently the antihistamine serves to combat the allergic component of the respiratory condition. It is said[59] that certain of these agents have a definite palliative effect on the nasal congestion, discharge, lacrimation and cough that accompany acute upper respiratory infection. As noted in one authoritative source,[37] spasmodic bronchial cough without dyspnea, most frequently seen as a sign of allergy in children, often responds to antihistamine drugs.

The antihistamines are usually combined with the more familiar ingredients of cough syrups and expectorants. Illustrative of such preparations is the following formula for an expectorant, as given in the Florida Formulary:[60]

Diphenhydramine (Benadryl) hydrochloride	0.32 Gm.
Ammonium chloride	2.97 Gm.
Sodium citrate	1.24 Gm.
Chloroform	0.50 Gm.
Menthol	0.02 Gm.
Cherry vehicle, to make	120.00 cc.

BIBLIOGRAPHY

1. Feinberg, A. R.: Postgrad. Med. 13:266, 1953.
2. Sheldon, J. M.: Postgrad. Med. 14:465, 1953.
3. Anon.: Britol Digest 8:3, Dec. 1952.
4. Idson, B.: Chem. Rev. 47:308, 1950.
5. Leonard, F. & Huttrer, C. P.: "Histamine Antagonists," Review No. 3, Washington, Natural Research Council, 1950.
6. Feinberg, S. M., Malkiel, S. & Feinberg, A. R.: "The Antihistamines," Chicago, Year Book Publishers, 1950.
7. Lesser, M. A.: Drug & Cosmetic Ind. 67:620, 1950.
8. Seyler, L. E. & Simon, S. W.: J. Allergy 24:261, 1953.
9. Swartz, H.: Ann. Allergy 12:80, 1954.
10. Siegel, S. C.: Postgrad. Med. 12:563, 1952.
11. Richards, R. W. & Channings, A. R. G.: Chem. Products 15:40 & 89, 1952.
12. Idson, B.: Chem. Week 68:7, March 31, 1951.
13. Richards, P., Jr. (Hoffmann-La Roche Inc.): Personal communication.
14. Simon, S. W. & Toohey, J. J.: Ann. Allergy 10:484, 1952.
15. Wittich, F. W.: Ann. Allergy 10:625, 1952.
16. Shure, N. & Harris, M. C.: Med. Clin. North America, Sept. 1951.
17. Warin, R. P.: Brit. Med. J. 1:1066, 1954.
18. Wyngaarden, J. B. & Seevers, M. H.: J.A.M.A. 145:277, 1951.
19. Dannenberg, T. B. & Feinberg, S. M.: J. Allergy 22:330, 1951.
20. Gunn, C. et al: Chemist & Druggist 157:483, 1952.
21. Fishbein, M.: Mod. Med. 19:55, May 1, 1951.
22. Swineford, O., Jr.: Virginia Med. Mo. 78:399, 1951.

(*Continued on page 404*)

Grongoire

Grongoire

FOR

EXPERT

PRIVATE LABEL

COSMETIC MANUFACTURING

Assembly

Shipping

Creating

Packing

Storage

Grongoire

• NO ACCOUNT TOO LARGE OR SMALL •

Grongoire 127 Green St., Brooklyn 22, N. Y.

WRITE DEP'T. T

P·L·C

manufacturers

of

LIPSTICKS

FACE POWDER

DRY & CREME

ROUGES

MASCARAS

&

LIQUID & CREME

FOUNDATIONS

LOTIONS

CREMES

Inquiries Invited

P L C

Private Label Cosmetics

Co., Inc.

520 West 48th St., New York 36, N.Y.

(*Continued from page 403*)

23. Farrar, G. E., Jr.: Pennsylvania Med. J. 54:31, 1951.
24. Kaplan, M. A., Ehrlich, N. J. & Aaronson, A. L.: Ann. Allergy 11:108, 1953.
25. Anon.: "Expanding Horizons in Antihistamine Therapy," Bloomfield, Schering Corp., 1954.
26. Ripps, J. & Fuchs, A. M.: J. Allergy 24:525, 1953.
27. Spearman, G. K.: Ann. Allergy 11:769, 1953.
28. Parish, F. A.: Med. Times 82:131, 1954.
29. Sanger, M. D. et al: Ann. Allergy 11:354, 1953.
30. Silbert, N. E.: Ann. Allergy 10:465, 1952.
31. Jenkins, C. M.: Ann. Allergy 11:96, 1953.
32. Ferris, H. E., Alpert, S. & Coakley, C. S.: Amer. Pract. 3:177, 1952.
33. Offenkrants, F. M., Margolin, S. & Jackson, D.: J. Med. Soc. New Jersey 50:253, 1953.
34. Frankel, D. B. & Weidner, N.: Ann. Allergy 11:204, 1953.
35. Bernhard, W. G., Grubin, H. & Bryan, M. V.: J. Med. Soc. New Jersey 50-542, 1953.
36. Catalana, C.: Minerva Chir. 8:515, 1953.
37. Council on Pharmacy and Chemistry, A.M.A.: "New and Nonofficial Remedies," Philadelphia, 1954, p. 4.
38. Gravatek, A. P., Gottstein, W. J. & Cheney, L. C.: Antibiotics & Chemother. 4:551, 1954.
39. Editorial: J.A.M.A. 153:258, 1953.
40. Rapaport, H. G. et al: J.A.M.A. 153:1498, 1953.
41. Luippold, E. J.: J.A.M.A. 153:1498, 1953.
42. Maslansky, L. & Sanger, M. D.: Antibiotics & Chemother. 2:385, 1952.
43. Simon, S. W.: J.A.M.A. 153:1498, 1953.
44. Waxman, A. & Geshelin, H.: California Med. 75:93, 1951.
45. Hall, T. C. & Di Raimondo, V.: Ann. Int. Med. 40:1017, 1954.
46. Roettig, L. C. et al: Dis. Chest. 21:245, 1952.
47. Fisher, M. M. & Wilenski, N. D.: New York State J. Med. 54:659, 1954.
48. Simon, S. W. et al: J. Allergy 25:85, 1954.
49. Sanger, M. D. & Stein, I.: New York State J. Med. 53:1237, 1953.
50. Beck, C. A.: J.A.M.A. 153:1170, 1953.
51. Balme, H. W. & Dormer, A.E.: Brit. Med. J. 1:500, 1954.
52. Robinson, K. C. & Binns, T. B.: Brit. Med. J. 1:705, 1954.
53. Seidman, E. E. P. & Schaeffer, N.: Ann. Allergy 12:85, 1954.
54. Gakenheimer, W. C. (Merck & Co., Inc.): Personal communication.
55. Vickers, M. A.: Laryngoscope 64:632, 1954.
56. Editorial: J.A.M.A. 145:320, 1951.
57. Committee on Public Health Relations, New York Academy of Medicine: J.A.M.A. 146:495, 1951.
58. Cronk, G. A. & Marty, F. N.: New York State J. Med. 52:579, 1952.
59. Anon.: Mod. Pharm. 38:4, Jan. 1953.
60. Bureau of Professional Relations: "Accepted Florida Formulary," Gainsville, Florida College of Pharmacy, 1951, pp. 29-30.

(*To be concluded*)

F.D.C. ACT ENFORCEMENT

(*Continued from page 319*)

Today, when through factory inspection, complaint, or otherwise a product is suspected, a prompt check of samples is made. If the suspicion is confirmed, the firm involved is advised and it is invited to join with us in taking whatever action is necessary to remove the product from the market in the shortest possible period of time. The circumstances of distribution determine whether or not press releases, radio announcements, or notification of specified groups such as physicians is the proper procedure to follow. In any event, after it appears that the firm has removed the dangerous product from the market the Food and Drug Administration makes spot checks throughout the Nation or whatever portions of it are involved to appraise the efficiency of the recall.

The second most important area of work involves insanitation, filth, and decomposition. During each week of the 1953 fiscal year, 111 tons of unfit food was seized and removed from trade channels because it was either rodent defiled, insect infested, or decomposed.

This brings us to the scope of accomplishments under this law. During the year we inspected nine per cent of the 96,000 establishments subject to inspection. Thus, it will take us between 11 and 12 years to cover them all. A review of the factory inspections made led to followups whereby 18,350 samples from interstate shipments were collected; 18 per cent of these samples were found to be so seriously in violation of the law as to require their reference to the Federal courts.

Much the same picture is presented in the case of imports. During the year 327,500 lots of foods, drugs,

and cosmetics were offered for importation into the United States. Our facilities permitted us to inspect 10 per cent of them. This meant that we sampled about 32,000 lots; 16 per cent of which were seriously illegal and were denied entry. These percentages are not, of course, representative of the percentage of our total food and drug supply that is illegal. The samples were selected from shipments most likely to violate the law. It is obvious, however, that even on this basis the percentage of illegal products is too high.

One final comment on the facilities available for the enforcement of this law. You have seen the growth of responsibilities during the period since the 1938 Act became law. Actually, it became fully effective in the fiscal year 1940. At that time there was a total of 783 people available to enforce the law. Today we have a total of 789 people.

DIRECT RESULTS FROM DIRECT ADVERTISING

(Continued from page 317)

During the first four weeks of the experiment, Abbott sent every physician in the test areas two very simple and inexpensive mailings featuring Product No. 1984. Since then, one mailing a week on the product has been sent to those doctors right down to the present time. A good many of these mailings were government postal cards. Others were small inexpensively printed folders. An occasional letter has been used. And, at regular intervals, samples of the product, accompanied by some piece of printed advertising matter, have been sent.

Our salesmen were not informed of this test campaign. Special measures, moreover, were taken to try to keep them from becoming aware of it or any sales increases which might result. With more than 600 products to sell and as much other direct mail advertising as Abbott does, such measures are not too difficult to arrange, and we have some reason to believe that they have been at least passably successful.

Now, let's look at actual sales results of our test campaign. The average monthly sale of Prescription Product No. 1984 in the four test areas before the start of our experiment amounted to just $693.82. At the end of only three months, with the program described, the average monthly sale in the four test areas had moved upward to $1,938.70, an increase of 179.4 per cent. In six months the rate of sale was averaging $2,536.60, or a 265.5 per cent increase. At eighteen months, at twenty-four months and at thirty months sales in the test areas swept on upward. At the end of thirty-six months, that is, at the end of May this year, the combined average monthly sale of No. 1984 was at a rate of $5,727.05 a month, an increase of 725.4 per cent over the $693.83 average rate at the time the test was launched. It has been mentioned that, at the outset of the experiment, the average sale per doctor of No. 1984 in one of our test areas was substantially above that of the comparable national average. Sales increases in this area are as remarkable

To Your Cosmetic Powders

Add "KIND-TO-THE-SKIN" Properties

with Horse Head U.S.P. ZINC OXIDE

Your dollars work two ways when you use Zinc Oxide in your face and body powders . . . because Zinc Oxide imparts *both* cosmetic and pharmaceutical properties:

1. COSMETIC PROPERTIES

High Covering Power
Zinc oxide gives more covering power *per dollar* than any other high covering pigment used in cosmetic powders.

Deodorant
Zinc oxide neutralizes perspiration acids.

Sunburn-ray screen
Zinc oxide is opaque to ultraviolet light.

2. PHARMACEUTICAL PROPERTIES

Zinc oxide is widely used in dermatology in the form of zinc oxide ointment and calamine lotion.

It owes its popularity, according to one recognized authority,* to a combination of at least three qualities: it is non-toxic, protective and mildly astringent.

* *The Dispensatory of the United States of America, 1950 Edition*

HORSE HEAD PRODUCTS

THE NEW JERSEY ZINC COMPANY
Founded 1848
Products Distributed by
The New Jersey Zinc Sales Company
New York · Chicago · Boston
Cleveland · San Francisco · Los Angeles

FOUNDED T & B 1856

The Symbol of Standardization

GUMS

ARABIC
TRAGACANTH
KARAYA

WHOLE GUM—Cleaned and repacked before shipment.

POWDERED GRADES—Standardized by milling under strict laboratory control.

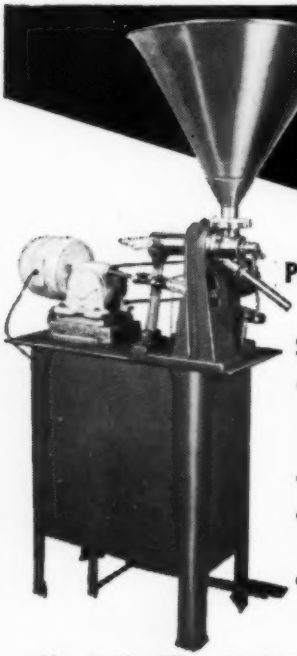
GRAIN GUMS—Graded to uniformity and standardized.

T & B STANDARDIZED GUMS are your best protection against production difficulties.

All Powder Gums Standardized by Laboratory Control

THURSTON & BRAIDICH
286 Spring Street **New York 13**
Represented in Chicago by A. C. Drury & Co., Inc.

for ACCURATE, ECONOMICAL filling of tubes and jars



THE PERL PISTON FILLING MACHINE
with the NEW SELF EXPANDING PISTON

- **Perfect for pastes or liquids — pharmaceuticals and foods**
- **Fills without air pockets**
- **Designed for accurate, trouble-free operation**
- **Durably constructed for long life**

Also Bottle Filling Machines, Can Filling Machines, Tube Closing Machines and Bottle Cleaning Machines

PERL

PERL MACHINE MFG. CO.
68 JAY STREET **BROOKLYN 1, N. Y.**

as in the others. Sales of the product in the rest of the country have continued to decline.

To explain why the test campaign has not been extended to reverse the downward sales trend of No. 1984 in the country as a whole, I must tell you that after our experiment was launched one of the raw materials used in manufacturing the item increased so greatly in price that very little profit remained in the finished preparation. By that time, however, the experiment had become sufficiently interesting so that we decided, first, to avoid bringing a second variable into the experiment by increasing the price of the product, and, second, to continue the experiment simply to gain added knowledge.

One further note about the test direct mail program for Product 1984. We had planned originally to continue our campaign until sales of the product reached a plateau in our test areas, something which would have had to happen sooner or later. After that, we planned to carry the experiment into a second phase. However, the hazards of life on our planet and the occupational diseases of advertising men being what they are, we decided recently not to wait until a sales plateau had been reached. After all, if the sales chart offers any indication, that levelling-off might still be years away. For this reason, the second phase was launched July 1. On that date all advertising for Product No. 1984 was discontinued in one test area. There was a 75 per cent reduction in the second area, 50 per cent in the third and 25 per cent in the fourth. To us with Abbott Laboratories, at least, it is going to be extremely interesting to see how large a volume of direct mail is necessary just to hold sales of the product once they have been achieved.

Brief mention may be given to a few other uses we have made of the method of controlled experiment to measure the sales effectiveness of direct mail. One instance involved the same product employed in the experiment already described. It even involved the same advertising material. This time, though, the mailings were spread out so that physicians in the second test received the advertising only half as frequently as those in the first. Sales increases in the half-frequency test averaged almost exactly 50 per cent of those in the original campaign.

The product is different in a third experiment. Here, we employed a campaign quite similar in type and volume to that used in the first test program for Product No. 1984. Our test mailings were addressed to all physicians in each of two groups of test areas. Both groups of test areas contained approximately the same number of physicians. All of the doctors in the first group were sent exactly the same advertising as those in the second—with one important exception. As one of the mailing each month, samples of the product were sent to all doctors in the first group. In place of the samples, doctors in the second group were sent a mailing which offered the samples, but to get them these physicians had to send us a request each time on a business reply post card. Where doctors had to ask for

the samples to get them, every dollar of sales increase cost one and one-half times more than where we merely sent the samples to every doctor every month without request. This test program was carried on, incidentally, at the same time the product also was being promoted by a quite heavy national direct mail and medical journal advertising campaign.

A similar undertaking was launched with yet another of our products. In this case, we tested the effect of a heavy direct mail campaign which included the mailing of samples of the product every month to every doctor in one test area against the effect of sending samples every other month in a comparable area. In this experiment, reduction of the number of samples sent by one-half resulted in an 80 per cent reduction of the sales effectiveness of the campaign.

At least one thought will have occurred to you by now. It is that this method of measuring the sales effectiveness of direct mail can be used equally well if it is desired to cover most of a market area with one's advertising and retain only small areas into which advertising is not mailed for use as controls. This is a more expensive way, but may offer advantages under some circumstances.

Of course, controlled experiment is not the only means for measuring the sales effectiveness of direct mail. One method used in a recent study has the advantage of throwing more light not only on the effectiveness of pharmaceutical direct mail, but also on the relative effectiveness of it and various other forms of sales promotional activity. The study came about because the American Medical Association wanted to learn more about where physicians obtained information acquainting them with new drugs. An independent and eminently reputable marketing research organization conducted the investigation. It covered a scientifically selected cross-section of all physicians in private practice in the United States. Personal depth interviews of forty-five minutes to one and one-half hours' duration, were conducted with each physician in the cross-section.

The first question asked on each interview was, What was the last drug which was new to you which you prescribed for the first time?

Drugs named by physicians in their answers will be designated A, B, C and so on. As you will guess, this is because some of the names are tongue-twisters. New Drug A was first by what we will quickly see is a very substantial margin. Of all physicians interviewed, 17 per cent reported that Drug A was the last drug which was new to them which they prescribed for the first time. Incidentally, the fact that new drug A led all of the others in frequency of mention didn't surprise us too much when we learned about it at Abbott Laboratories. New drug A is manufactured only by Abbott Laboratories and one other firm, so we had ample reason to know that its prescription use was increasing very rapidly at the time the study was made.

New drug B was named by 11 per cent of all physicians interviewed, while drug C was named by five per cent. New drugs D, E and F tied for fourth place,

CHLORHYDROL®

Custom-made for your

Anti-Perspirant

FORMULAE

Chlorhydrol (Aluminum Chlorhydroxide Complex) is the most effective astringent you can use. Whether you are making a lotion, cream, cologne or powder, Reheis can supply the one *right* form of Chlorhydrol that will enable you to incorporate it easily in your particular product at surprisingly low cost. That's because Reheis has developed five forms of Chlorhydrol—Granular, Medium, Fine, Impalpable, and 50% w/w Solution—each produced for specific formulation requirements.

For example, Reheis Granular Chlorhydrol (100% through 4 mesh) is most rapidly soluble in water, yet is so compact that it requires little space for storage.

No other astringent can offer you these advantages:

- **mildly acid**
- **effective anti-perspirant action**
- **good deodorant properties**
- **better astringent qualities**
- **needs no buffering**
- **no skin irritation**
- **non-destructive to fabrics**

Write today, on your letterhead, for descriptive booklet

FINE REHEIS CHEMICALS

REHEIS COMPANY, INC.
Manufacturers of Fine Chemicals
BERKELEY HEIGHTS · NEW JERSEY

Italian

TALC

CHARLES MATHIEU, Inc.
77 RIVER STREET • HOBOKEN, N. J.
Telephone: HOboken 3-4412
New York: BArclay 7-3618

HUISKING

CHEMICALS
PHARMACEUTICAL INDUSTRIAL
OILS • VITAMINS • DRUGS • RAW MATERIALS
Importers Exporters Manufacturers

CAMPHOR USP POWDER DuPont
CAMPHOR USP TABLETS ½ & 1 OZ. Tower Brand
QUININE & SALTS Braunschweig
QUINIDINE & SALTS Braunschweig
HYOSCINE HYDROBROMIDE
HYOSCYAMINE Hydrobr. & Sulfate
SUGAR OF MILK USP & Commercial
CHLOROPHYLL Allen's
MENTHOL USP
ATROPINE SULFATE & ALKALOID
THYMOL NF Crystals
EPHEDRINE HYDROCHLORIDE USP
BRUCINE SALTS
ICHTHAMMOL
SULFUR USP PRECIP. English
MAGNESIUM CARBONATE USP Blocks
NAPHTHALENE
HAARLEM OIL

COD LIVER OIL USP
Peder Devold
ALL POTENCIES
For Poultry & Animal Feeding:
COD LIVER OIL Devolked®
USP & Fortified Grades
VITAMIN A & D FEEDING OILS
Devold
WHEAT GERM OIL
Peder Devold

SANTONIN and ALKALOIDS of American Manufacture

CHAS. L. HUISKING & CO., INC.
PEDER DEVOLD OIL CO. DIV. SANTONINE CO. OF AMERICA DIV.
215 FOURTH AVENUE, NEW YORK 3, N. Y.
Factory & Warehouse: 45 CLINTON AVENUE, BROOKLYN 5, N. Y.
Telephone: GRamercy 5-3900
Telegrams: HUISKING, WUX, NEW YORK
Cables: HUISKING, NEW YORK
London Agents: Whapeler & Huisking Ltd. 26 Great Tower St., E.C.3
Since 1910

each being reported by two per cent of the physicians interviewed as the last drug new in their experience which they prescribed for the first time.

So far, with the mention of just six drugs, 39 per cent of all physicians interviewed have been accounted for. To avoid over-crowding our chart with small lettering, no more percentages are listed there. The first six drugs, however, were followed in rank by sixteen others, each of which was mentioned by an average of one per cent of the physicians queried. After that, there came scattered mention of an exceedingly large number of additional drugs, each named by less than one per cent of those interviewed. Eight per cent of the doctors questioned couldn't remember, do not prescribe drugs, or refused to answer.

The second question asked of every doctor in the sample was, Where did you happen to get the information about it which led you to prescribe it?

Of all physicians asked, 44 per cent obtained from pharmaceutical detail men the information which led them to prescribe the last new drug in their experience.

Twenty-two per cent of the physicians interviewed said that their information came from direct mail advertising.

Seventeen per cent of the doctors said that published papers in medical journals influenced their action.

Medical journal advertising was mentioned by 15 per cent of the doctors questioned.

Private discussion with other doctors led 11 per cent of the physicians interviewed to prescribe a drug new to them for the first time.

Staff meetings in hospitals swayed another five per cent.

By now it will be seen that the percentages given add to more than 100. This occurred because of multiple answers.

Other sources, which have been omitted, can be lumped under the catch-all classification of Miscellaneous. Medical conventions, reference books, county medical society meetings and several other sources were named, but none by more than two per cent of the physicians.

Naturally, no pharmaceutical sales or advertising executive would seriously propose that the apportionment of prescription product promotion expenditures be correlated with the percentage figures given here. Individual product marketing problems vary far too widely to lend themselves to the application to any fixed general rule of this kind.

However, that isn't the point. The important thing is that the American Medical Association market researchers have added further to our knowledge of the effectiveness of various forms of sales promotional effort, including direct mail advertising.

THE SUNTAN INDUSTRY

(*Continued from page 311*)

required to produce these four gradations of ultra-violet stimulation are given in Table 1 on Page 409.

Table 1
RESPONSE OF AVERAGE UNTANNED
JUNE SUNLIGHT AT NOON

Minimum Perceptible Erythema	20 minutes
Vivid Erythema	50 minutes
Painful Burn	100 minutes
Blistering Burn	200 minutes

Minimum Perceptible Erythema is known as a threshold response. This reaction is chosen as an indicator inasmuch as it is more easily recognized as compared with advanced reactions. In other words there is appreciably more certainty in approximating whether or not a visible change of color has occurred, than in attempting to judge degrees of color.

The anterior or inside portion of the forearm was selected as the most suitable area for irradiation. This choice was advised by accessibility, regularity of surface, ease of manipulation and by the fact that this region is generally not directly exposed to sunlight which is advantageous for obvious reasons. On the most desirable surface between the elbow and the wrist, section off with adhesive an area four inches long. This is to be divided transversely into eight equal sectors with one-eighth inch strips adhesive. The first three sectors are to be used as controls. Before placing the last five strips of adhesive, apply the product being tested in a film comparable to that in which it would be used in actual service. Proceed to mark off this protected surface into five equal sectors, exactly as done on the first three sectors. Due to the one-eighth width of the adhesive, each sector will be slightly less than one-half inch wide, longitudinally. Transversely, each sector extends more than is necessary around the forearm. To further confine the field, take two strips of one inch wide and five inches long adhesive and set parallel to each other and to the center line of the forearm about one inch apart over the control and test areas. In this manner each sector is sharply defined with the dimensions one inch transversely and about three-eights inch longitudinally. As previously directed, the first three sectors are controls and the remaining five are actual test surfaces. We are now ready to proceed with irradiation.

There are two laws of physics which govern the accuracy or inaccuracy of the results obtained by the Erythemal Reaction. The first, known but not observed by all, is that light varies inversely as the square of the distance. It is readily appreciated, therefore, that even slight inequality in distances from the manifold target surfaces to the major source of energy emanation, the arc tube itself, will result in inequality of energy reception. It goes without saying that each square unit of surface under irradiation must be subject to equal radiation intensity, if the maximum of exactitude is sought. The second law of concern is, "in light, the angle of incidence is equal to the angle of reflection." Radiant energy to be effective must be absorbed. The greater the angle with which such energy strikes a surface, the greater the reflection and inversely, the less

Then VEEGUM can be the answer to your problem.

This refined, inorganic physical conditioner has proved a boon to pharmaceutical and cosmetic formulators.

VEEGUM is remarkably versatile. *It suspends, emulsifies, thickens, and is thixotropic.*

IF YOUR PROBLEM IS WITH SUSPENDING, VEEGUM provides complete suspension at lower viscosities than organic gums. It is used and recommended as a suspending agent in calamine preparations and suspensions of pigments, deodorants, and sulphur compounds.

IF YOU NEED AN EMULSION STABILIZER, you'll discover that less than 1% VEEGUM will permanently stabilize many types of emulsions containing various oils, fats and waxes over a wide range of pH. As an emulsifying agent in hand lotions, shaving preparations, dental creams, deodorants, hair preparations, pigmented make-up, sun-tan lotion and pharmaceutical ointments, VEEGUM has no equal.

WHERE VISCOSITY CONTROL CAUSES YOU TROUBLE, VEEGUM eliminates the short-comings of commonly used thickeners. It thickens with heat to maintain product consistency at higher than normal temperatures. Thixotropy gives it the suspending ability of a gel through long periods of storage. Quick dispersion of VEEGUM is obtained in either hot or cold water. Here is the ideal viscosifier for shampoos, toothpastes and cosmetic creams, lotions and suspensions.

VEEGUM offers these opportunities for you to keep your formulations from running wild . . . to enhance and improve your product. If you haven't tried this white, opaque, non-tacky and non-gelatinous physical conditioner, ask us for full information today. VEEGUM is, of course, non-toxic and non-irritating.

SEND FOR THE VEEGUM STORY

R. T. VANDERBILT CO.
SPECIALTIES DEPARTMENT
230 PARK AVENUE, NEW YORK 17, N. Y.

Please send ☐ VEEGUM Bulletin J53
☐ sample of VEEGUM.
☐ information on using VEEGUM for:

_____
(state application)

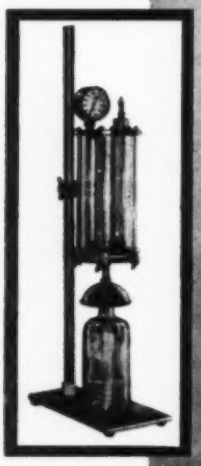
NAME_____

POSITION_____
(Please attach to, or write on, your company letterhead)

1897 CHARLES B. CHRYSTAL CBC MINERALS, CLAYS, COLORS 1897 NEW YORK 1954

U.S.P.
•
PRECIPITATED
CHALKS
•
COLLOIDAL
KAOLIN
•
TALCS

CHARLES B. CHRYSTAL CO., INC.
53 PARK PLACE, NEW YORK 7.
PLANT-WAREHOUSE: JERSEY CITY



Especially designed for the handling of small volumes of liquid. Stainless Steel and Pyrex construction.

2800 cc
LABORATORY FILTER

Cloth, paper, asbestos pads or any other filter media may be used. Has special outlet assembly for sterile bottling for bacteriological work.

Also available in smaller sizes.

Write for catalog, a helpful answer to filtration problems.

HORM PRESSURE & VACUUM LABORATORY FILTERS

F. R. HORMANN & CO., INC., 17 Stone Street, Newark 4, N. J.

the absorption. In the technique under discussion this is not so important. But it is of noteworthy significance in those careless and crude analyses where a relatively large area, usually on the back or side, is marked off into 10 or 20 or more squares and the entire surface irradiated. Such a procedure disregards basic and influential laws covering the behavior of light. The heterogenous planes of the anatomy on the back or side regions, will vary both as to distance from the arc tube and the angle presented thereto. Such inequalities will surely repercuss in formidable differentials in energy reception and absorption for the multiple areas under observation. In the simultaneous irradiation of a number of products as described, all sectors must receive equal intensities of ultra-violet stimulation for reasons that are abundantly clear.

Irradiation and Evaluation

With the proper instrument, or the eye, adjust the quartz tube of the lamp to a horizontal position. The forearm should be rested on a comfortable support with the test areas exposed to the lamp. Take necessary steps to assure that the test area on the forearm is level. The quartz arc tube must be in exact alignment with the longitudinal center line of the total surface to be irradiated. The arc tube, which is four and one-half inches long, longitudinally, should cover the entire field and extend one-fourth inch beyond each extremity. In other words, each end of the arc tube should overlap by one-fourth inch, theoretical perpendicular lines extended upward from the longitudinal extremities of the entire test area. These essentials concertedly constitute an effort to insure that each square unit of area will be the recipient of equal amounts of actinic radiation. Though it may be tedious to enforce, the described alignment must be rigidly maintained in every respect during the entire period of irradiation. Adjust the gap between the generator tube and the target to 12 inches. At this distance an MPE should be produced in one or two minutes. Lesser potency may be compensated for by decreasing the target distance several inches. Wipe the quartz arc tube with a soft cloth moistened with pure alcohol. The burner should be brought to maximum output by at least ten minutes' previous operation. Goggles or glasses impervious to ultra-violet should be worn during irradiation and all surface should be protected from accidental radiation.

We shall number the individual sectors commencing at the elbow which shall be number 1, the next sector, number 2, etc. The first three sectors, numbers 1, 2 and 3 are for control purposes. The remaining five are for analysis, as previously outlined. With all conditions fulfilled, irradiate all eight sectors for one minute. With a sheet of opaque paper of convenient dimensions, cover sector number 1; allow another minute to pass, move paper to also cover sector No. 2; after the third minute has elapsed, move paper to cover sectors No. 1, 2, and 3. Securely cover these three control sectors. If these directions are followed, sector No. 1 will have received a

one minute exposure; sector No. 2, two minutes; sector No. 3, three minutes. Allow irradiation to continue until eight minutes have passed at which instant sector No. 4 is to be covered. Upon the termination of four more minutes, also cover sector No. 5. In this manner each succeeding sector is also to be covered after the passage of four minutes. After completion, individual irradiations will be as follows:

Sector No. 1..1 minute	Sector No. 5..12 minutes
Sector No. 2..2 minutes	Sector No. 6..16 minutes
Sector No. 3..3 minutes	Sector No. 7..20 minutes
Sector No. 4..8 minutes	Sector No. 8..24 minutes

Allow ten hours to pass for the appearance of maximum reaction. We are now ready to interpret observations which may be now made. Not more than ten hours should be allowed to pass before taking readings inasmuch as threshold responses have a tendency to fade after such period. The basis of this analysis, as the name implies, depends upon dermatologic reaction or reddening of the skin. The degree of erythema signifies the amount of actinic energy transmitted by the protective film under investigation. Some experience is necessary to identify threshold responses, i.e., MPE, but this is easily acquired. Implementation of details can best be illustrated by an actual case: In the analysis of product "X" 20 minutes of irradiation was required to produce an MPE. In the control sectors, an MPE was evoked in two minutes. By simple arithmetic, the percentage transmission would be obtained by dividing the effective irradiation, two, by the total irradiation, 20, multiplied by 100 yields 10 per cent transmission.

Erythemal Analysis Not Fully Valid for Sunlight

The transmission figures revealed by the "Erythemal Reaction" technique cannot be regarded as a valid estimate of sunburn protective efficiency under the immensely more gruelling conditions imposed by solar radiation. Probing into this phenomenon involves the spectral dissimilarity between quartz mercury arc and solar radiation.

Table 2

RELATIVE ERYTHEMAL EFFECTIVENESS OF RADIATIONS OF VARIOUS WAVE-LENGTHS

Wave-Length	Relative Effectiveness per unit of energy
3342 Angstroms	0.000
3132 "	0.025
3024 "	0.35
2967 "	1.00
2925 "	0.25

Luckeish, Holladay and Taylor, 1930

As signified in table 2, the peak of erythemogenic effectiveness is at 2967 Angstroms. The quartz mercury arc, filtered with Corex "D" glass, emits three strong lines in the erythemogenic zone; 2970, 3020 and 3130 Angstroms. It is therefore quite capable of producing ultra-violet response from the first to the fourth degree. A sunburn preventive effective against these three

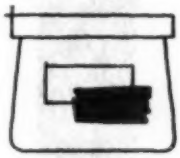
FOR THE DRUG AND COSMETIC INDUSTRY

ULTRAVIOLET ABSORBERS FOR SUN-TAN PREPARATIONS

hydroquinone diethyl ether
hydroquinone dimethyl ether

PERFUME AROMATICS

hydroquinone dimethyl ether
Compound 77-B



STABILIZERS

Tenox BHA for such oils and waxes as paraffin, stearic acid, mineral oil and lanolin

FINGER NAIL POLISH

film former
cellulose acetate
plasticizers
dimethyl phthalate
diethyl phthalate
solvents
acetone
ethyl acetate

For samples of these Eastman industrial chemicals, call or write to our nearest sales office.

Eastman CHEMICAL PRODUCTS, INC.
KINGSPORT, TENNESSEE
a subsidiary of Eastman Kodak Company

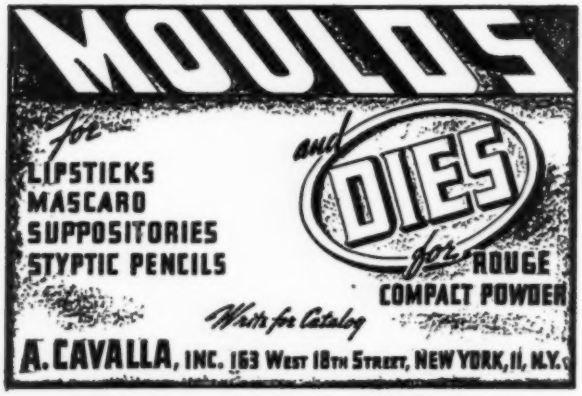
SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; New York—260 Madison Ave.; Framingham, Mass.—65 Concord St.; Cleveland—Terminal Tower Bldg.; Cincinnati—Carew Tower; Chicago—360 N. Michigan Ave.; St. Louis—Continental Bldg.; Houston—412 Main St. **West Coast: Wilson Meyer Co.,** San Francisco—333 Montgomery St.; Los Angeles—4800 District Blvd.; Portland—520 S. W. Sixth Ave.; Seattle—821 Second Ave.

American Aromatics, Inc.

Essential Oils

Aromatic Chemicals

24 East 21st Street, New York 10, N.Y.



wave-lengths, should, in view of the above, also provide similar protection against solar burns. This is only partly true. That portion of the solar spectrum responsible for burns and tan, (there is another pigmentogenic zone), lies between 2950 and 3200 Angstroms. But herein, unlike the mercury arc, the spectrum is continuous, i.e., each wave-length in the range given above, is present. The continuous character of solar radiation in the erythemogenic zone, either elicits a stronger dermatologic response, or is more penetrative through the protective film of a sunburn preventive, than the three line spectrum of the filtered mercury arc. Thus in our hypothetical analysis of product "X" which necessitated ten times the minimum erythemal dose to provoke an MPE, will in sunlight, require possibly only seven or eight times the minimum erythemal dose for an MPE reaction. To repeat, this reduction in efficiency is attributable to either the epidermis is more sensitive to a continuous spectrum as found in sunshine, or the screen is not absorbing every wave-length striking same. Summed up, it simply means that the product tested is now offering substantially less protection in sunlight than it did under the mercury arc lamp. This does not fully explain the discrepancy of sunscreen performance between the mercury arc and solar radiation.

Further Spectral Disparity

Another formidable disparity between the mercury arc and solar spectra, affecting erythemal response, is the huge quantities of near and far infra-red rays found in sunlight, but in which the mercury arc is relatively poor. Upon impact with the skin this energy generates surface and sub-surface heat thereby inducing a hyperemia or increased blood flow. This phenomenon seems to have been almost entirely ignored by workers in the suntan field.

Stahl and Simsch[3] found that hyperemia of the skin from heat as on a hot summer day, or as a reaction to cold baths or brisk rubbing, furthers sunburn and subsequent pigmentation. They also claim that hyperemia is the chief factor in the development of erythema and pigment. Hill[4] states that the erythemogenic effect of the quartz mercury arc is much diminished by low temperature. Laurens[5] reports that the hyperemia produced by the long wave-lengths increases the action of the ultra-violet. The writer conducted a few limited experiments to determine to what extent hyperemia augmented susceptibility of the skin to ultra-violet. The inside section of the forearm was marked off as described earlier. About four one-half inch sectors will be sufficient. In this experiment each sector should be about one and on-fourth inches transversely. Down the center of these four or more sectors, place a strip of one-eighth inch wide adhesive, bisecting all sectors longitudinally. Assuming four sectors are laid off, by virtue of the bisecting strip, we now have eight half sectors—four on each side of the dividing strip. With an opaque, non-conductor of heat, cover all four sectors on one side of the dividing line. This leaves the four

sectors on the opposite side exposed. These four exposed sectors are to be heated with any source of infra-red until an appreciable hyperemia has been stimulated. Immediately cease infra-red radiation, remove cover from protected side and proceed as previously described, to determine the MPE of the four whole sectors, which includes four halves with, and four halves without hyperemia. It was found that an MPE was produced in the hyperemic surface in two minutes whereas the unheated area required three minutes for the same response. Readings were taken ten hours after ultra-violet irradiation which was more than sufficient time for the disappearance of the hyperemic erythema. Since it took one-third less exposure time for equal responses, there had occurred a 33 per cent increase in ultra-violet sensitivity, which must be ascribed to hyperemia or increased blood flow.

The question now arises, what is the ratio between different degrees of hyperemia and skin sensitivity to actinic energy. Loewy and Dorno[6] assert that long infra-red rays raised the temperature of the skin from 32° to 41°-44° C., or a maximum of a 12° rise. Sunlight produces a maximum cutaneous temperature of 38° C., or a 6° rise. In both instances there has taken place an increase in temperature and subsequent hyperemia. Two unknowns present themselves: what is the proportion between different temperatures and the hyperemias induced thereby? Are variations in degrees of hyperemia capable of producing changes in susceptibility to actinic ultra-violet radiation and to what extent.

As a partial answer to these questions, there are limitations in vascular capacity irrespective of increases in cutaneous and subcutaneous temperatures. Therefore it cannot be said that a 12° rise in skin temperature will produce twice the hyperemia of a 6° rise. The safest hypothesis would be to strike an average. A 12° increase in skin temperature was followed by a 33 per cent increment in ultra-violet sensitivity. The maximum rise in skin temperature in sunlight was 6°. Does this mean that the increase in sensitivity in sunlight would be half of 33 per cent? This is doubtful. The truth lies somewhere between the observed and theoretical potentials. Therefore the safest course would be to average theoretical possibility and proven data. Equated, we have 6:12::X:33 or 16.5 per cent increased susceptibility for a 6° temperature rise. Averaging 16.5 per cent and 33 per cent yields the logical figure 25 per cent.

Our indicator, the skin, employed in Erythemal analysis, possesses two values—one with and one without hyperemia. If the data obtained without hyperemia is to be valid for sunlight, compensation must be made. Therefore, to whatever transmission figures are realized through Erythemal examination, an increase of 25 per cent must be added to attain a more accurate picture of behavior under the sun. This only one compensatory factor—there remains still another.

We have brought into focus two spectral discrepancies responsible for the divergent performance of sunburn

POTDEVIN
"Corliss" Automatic Labeler and Coder for Vials and Ampules

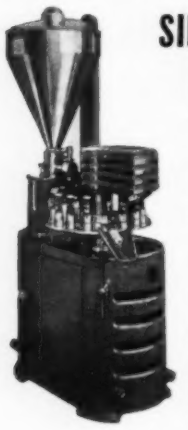
Fully automatic! Labels and codes up to 46 vials or ampules per minute. Labels can be either spot or full wrap-around. Special stock is not required. Machine weighs only 75 pounds. Can be carried anywhere.

POTDEVIN MACHINE CO.
257 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

Fragra-scents
FINER PERFUME BASES
Modern · Exotic
Floral · Bouquet
Types
Manufactured by:
NEUMANN, BUSLEE & WOLFE, INC.
5800 NORTHWEST HIGHWAY CHICAGO 31, ILL.

GENUINE
ESSENTIAL OILS
From
Continental & Colonial France
ABSOLUTES
and
CONCRETES
PRODUCTS OF
ADRIAN & CIE., (Marseille)
One of the World's Most Important Suppliers
U. S. Exclusive Distributor:
WILLIAM A. HOFFMAN, INC.
366 BROADWAY, NEW YORK 13, N. Y.
COrtland 7-0804 Cable: Aromical, N. Y.
40 Items prompt from our New York stock

KALIX-DUPUY
AUTOMATIC TUBE FILLING, CLOSING & CRIMPING MACHINE



SIMPLICITY • LOWER PRICE
IMMEDIATE DELIVERY

★ 120 Gross Daily—One Operator.
★ 15 Minutes to Change Size. Very low Change cost.
★ Quickly Cleaned — No Hose — Fills Tubes, Jars or Cans.
★ Accurate Fill—No drip—No smearing—No air.
★ Handles all metal tubes ⅜" to 1½" diameter.
★ Two-fold—Three-fold or Quadruple fold.
★ No tube—no fill. Coding Jaws—Automatic Ejector.
★ Cap Tightener.
★ Stainless Steel Contact Parts.
★ Fully guaranteed—Replacement parts and service readily available.

COMPLETE SERVICE and PARTS FROM NEW YORK STOCK
•
WRITE FOR DESCRIPTIVE FOLDER AND PRICES

HARING EQUIPMENT Corp.
EXCLUSIVE KALIX-DUPUY DISTRIBUTOR
533 WEST BROADWAY, N. Y. 12 • GR 7-2217

preventives under mercury arc and solar radiation. Briefly, in review, they are: long and short infra-red rays abundant in sunlight but comparatively poor in the mercury arc spectrum; the continuous spectrum of solar radiation and the line spectrum of the mercury arc. We have offered a constant to compensate for infra-red energy. To counterbalance variance of ultra-violet spectra, will at best, be an empirical estimate. A compensatory constant of 10 was evolved as follows: The writer was fortunate in having available an unlimited number of persons directly on a beach who offered assistance in this study. They were given a sunburn preventive, which after repeated analysis by the Erythemal technique and after compensation for infra-red, showed a transmission of 12.5 per cent. These subjects were asked to remain on the beach for four hours, which, incidently, is the average exposure indulged in by most persons. According to the Luckeish data, (Table 1), this exposure is more than sufficient to produce a blistering burn on average untanned skin. Protected by a film which Erythemal analysis indicated a transmission of 12.5 per cent, these surfaces should have been recipients of 30 minutes irradiation, (12.5 per cent of 240), to be regarded as 100 per cent effective, or a reaction somewhat in excess of an MPE. This was not the case. In every instance, while there were no burns as evidenced by the absence of pain, dermatologic observations revealed responses definitely surpassing that of an MPE, and these in the main, were slightly below the VE stage. This seemed in complete agreement with theoretical calculations. Since 12.5 per cent plus the constant, 10, yields a total of 22.5 per cent, this percentage of 240 nets 54 minutes of 100 per cent effective irradiation or slightly more than that necessary to stimulate a VE. As already mentioned, none reached the full VE stage. The writer was not disturbed by this deviation. We shall later illuminate a number of complex situations and factors responsible for less than predicted reactions. However the results attained in the beach study described, were so consistent that they comprised adequate validity to offer 10 as an additive constant for the correction of ultra-violet spectral dissimiliarity.

Editor's Note: How much protection is desirable from sun screens, will be discussed in the next article by Mr. Stambovsky.

REFERENCES

1. Testing Sunburn Products, L. Stambovsky, Drug and Cosmetic Industry, July, 1933.
2. Artificial Sunlight, Luckeish, M.
3. Stahl, R., & Simsch, G., 1927, Klin. Wochsch., 6:1984.
4. Hill, L., 1924, Sunshine and Open Air.
   Hill, L., 1924, Lancet 2:299.
5. Laurens, H., The Physiologic Effects of Radiant Energy, 1933.
6. Loewy, A., and Dorno, C., 1925, Strahlentherapie 20:411.

PATENT THOUGHTS AND TRENDS

(Continued from page 341)

that "Parade of Sweets" was not registrable because the words, "Big Parade", had been previously registered for the same products. The Examiner took the position that the word "Parade" was the dominant part of the

mark. The Commissioner reversed the Examiner holding that it was improper to consider both marks as being "dominated" by the word "Parade."

Under present decisions of the Commissioner, it would appear easier to obtain registration of certain marks as the Patent Office should not dissect the marks and no single part of any trade mark should normally be considered more dominant than any other.

SUPPLEMENTAL REGISTER

The comments already made all apply to the Principal Register. In addition to this latter register, the Patent Office maintains another register called the Supplemental Register. Registration on the latter Register is not as valuable as registration on the Principal Register but the requirements are not as strict as those for registration on the Principal Register.

The principal requirement for registration on the Supplemental Register is that the mark shall be capable of distinguishing goods or services. This standard is easily met nowadays unless the word is a generic name of the article itself. However, there is a limit to which the Patent Office will go as evidenced by the fact that "Dual Drive" for engine and tool room lathes and "Sal-ad-Pac" for canned vegetables were refused registration.

Slogans

Registration of slogans appears to be easier than was formerly the case. "The BEER with the million dollar flavor" was held to be more than an ordinary or common place expression and registrable.

Perfume Bottles

A perfume bottle similar to one on which a design patent had expired was permitted registration on the Supplemental Register. The bottle was held to be capable of distinguishing as a result of 60 years continuous use in its unusual and unconventional form.

The same decision was reached in another case where the bottle sought to be registered as a trade mark was *identical* with a bottle shown in a design patent which had issued in 1929 for a term of 14 years. The Commissioner held that the bottle design had not become dedicated to the public but that such designs may become subject to exclusive use as trade marks.

The decision of a court in Lucien Lelong, Inc. vs. Lander Company, Inc. involving a long-necked bottle in which protection against unfair competition had been denied in view of the expiration of the design patent was distinguished on the ground that the court there had expressly failed to find that the plaintiff had established a secondary meaning for the long-necked bottle after the expiration of the design patent.

It will be appreciated that the decision upholding registrability of the bottle after the design patent thereon had expired will be of great importance, if it is adhered to. Since trade mark registrations can be

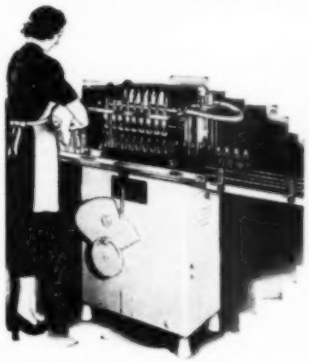
The MULTI-U-METER Handles Plastic, Odd-shaped Containers

Container guides hold any type, shape or size containers rigidly in filling position. Handles any liquid. Has automatic product supply and automatic filling control. Advanced features. Minimum floor space. Two-Head and Four-Head models. Write for Multi-U-Meter Bulletin.

Look to US for Every

Liquid Filling Requirement

You can get better production from fillers that simplify operations. For decades, U. S. engineering has consistently improved automatic machine operations to reduce manual dexterity. Result: greater and easier production. As a policy, every moving part is built for dependability-plus. That is why U. S. machines have that "never-let-you-down" reputation which you can depend upon. Whatever your liquid filling requirements, investigate U. S. machines.



Model B-49 Straightline Vacuum Filler handles any liquids. Quick changeover for all container sizes (AGST to gallons). For operation with or without discharge conveyor. Simple hand lever operation for multiple filling of up to 9 containers at a time, otherwise completely automatic. Filling is uniform, clean and fast. Write for Bulletin B-49.

• • •

Model B-2 Vacuum Filler handles any liquids; all containers ranging from AGST finishes to containers 4½" dia. Four container holding cups enable continuous filling of two containers at a time. Product supply is automatic. Portable. Ideal standby for peak loads. Write for Bulletin B-2.

• • •

Siphon Filler efficiently handles free-flowing liquids. For all container sizes including gallons. Stainless steel, no drip siphon tubes. Write for Siphon Bulletin.

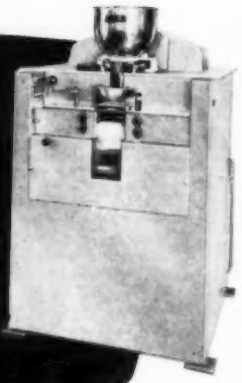
Model B-2

U. S. BOTTLERS MACHINERY COMPANY

511 North Rockwell Street • Chicago 18, Illinois

BOSTON • NEW YORK • PHILADELPHIA • HOUSTON • DALLAS • LOS ANGELES • SAN FRANCISCO • DENVER • SEATTLE • PORTLAND • PHOENIX • NEW ORLEANS • TAMPA ATLANTA • MONTREAL • TORONTO • VANCOUVER • WINNIPEG • EXPORT OFF.: TOLEDO

FORMAPAK
The Packeting Machine that Forms and Fills at Remarkably Low Cost



Formapak heat-seal packets any quantity of your dry, free-flowing products from a few grams up to ½ ounce. Operating speeds 40 to 100 per minute. You've never seen a stronger seal. Packets from 2" x 2½" to a maximum of 4½" x 4½".

BROWN
BAG FILLING
MACHINE CO., INC.
FITCHBURG, MASS.
U. S. A.

West Coast Rep.: Peter D. Bowley & Assoc.
210 Mississippi St., San Francisco, Cal.

DRYING TIME
CAN BE
CUT IN HALF
WITH HIGH-SPEED
COLTON OVENS
RECOVER ENTIRE OVEN INVESTMENT
IN A FEW MONTHS THROUGH SAVINGS
ARTHUR COLTON COMPANY
Established 1887
Div. Snyder Tool & Engineering Company
3495 EAST LAFAYETTE • DETROIT 7, MICHIGAN

renewed as long as they are in use, it is obvious that those who have introduced distinctive containers, bottles, and other similar devices can first obtain temporary design patent protection and then obtain more or less permanent trade mark protection.

PART III: TRADE MARK INFRINGEMENT AND UNFAIR COMPETITION

There have been relatively few court decisions involving protection against trade mark infringement and unfair competition and, consequently, it is difficult to detect a definite trend toward more or less effective protection. In one case, the Court of Appeals for the Second Circuit gave broad protection to the unregistered trade mark "Coppertone" for a skin tan preparation. The Circuit Court enjoined the defendant from using the name "Copper Tan" or any other synonym. The court emphasized that once a common law trade mark, although originally descriptive, had acquired a secondary meaning, it was entitled to the same degree of protection which is available to valid registered trade marks.

Not so fortunate was the American Chicle Company, the owner of the trade mark, "Clorets," for a chlorophyll chewing gum. It was held that the defendant's trade mark "Clor-Aid" did not infringe the registered trade mark "Clorets."

In the Third Circuit, it was held that there was sufficient dissimilarity in appearance, sound and meaning between "Royal Punch" and "Royal Crown" as applied to soft drinks, so as to negative likelihood of confusion.

In the Fifth Circuit the Singer Manufacturing Company was not successful as it was held that the defendants had the right to use the word "Singer" on rebuilt and repaired machines provided the machines were plainly and truthfully labeled as such.

The Ninth Circuit gave protection to Smith, Kline & French Laboratories' "Dexedrine" holding that it was a valid trade mark even though the basic patent had expired. The defendant was enjoined not only from using the word "Dexedrine" but also from offering the tablet in the same size, shape, and color in which Smith, Kline & French had put it on the market.

It is hoped that the foregoing summary will not only bring the interested readers up to date on developments in this field but will also clarify some misconceptions which always seems to be extant.

RECENT PATENTS

2,677,689—**Hoffmann-La Roche—Tropic Acid N-(Beta-Picolyl)-N-Lower-Alkenylamides.**
2,677,691—**Hoffmann-La Roche — Bibenzothiazoles.**
2,677,692—**Hoffmann-La Roche—Imidazoles.**
2,677,695—**Schering—Prepn. of 17 alpha-Hydroxy 20-Keto Steroids.**
2,677,697—**Mathieson—Basic Derivatives of Substituted Cinnamic Acids. Antispasmodics.**

2,677,701—Hoffmann-La Roche—Prepn. of Octadienols.

2,678,296—Am. Cyanamid—N-Benzyl-Betachloropropionamide Anticonvulsant.

2,678,302—Monsanto—Antiseptic Detergent. 4,4'-(p - hydroxy benzylidene) - bis - (3 - methyl - 6 - tert. butyl phenol).

2,678,312—Chas. Pfizer & Co.—Prepn. of Thiamin Chloride Hydrochloride.

2,678,313—Hoffmann-La Roche—Stable Molecular Compounds of 5-Phenyl-5-Ethyl-Barbituric Acid with 1-Phenyl-2-Amino-propanes.

2,678,316—Emulsol Corp. — Quat. Ammonium Germ Counteracting Agents.

2,678,317—Merck—N-Benzhydryltroplamines.

2,678,318—Beecham Research Labs. (England)—Prepn. of alpha-Amino Acids.

2,678,321—G. D. Searle — Dialkylaminoalkyl Amides of Alpha, alpha-Diaryl-toluic Acids.

2,678,899—Kremers-Urban Co.—Stable Solution of Physostigmine.

2,678,902—Colgate-Palmolive Co. — Fadeproof Brilliantine (with benzoyl resorcinol).

2,678,903—Corn Products—Production of Penicillin.

2,678,921—Colgate-Palmolive—Producing a Milled Non-Soap Detergent in Bar Form.

2,678,928—Ciba—8-Hydroxy-Quinolines with Halogen-Alkanemonocarboxylic Acids.

2,678,929—Abbott Labs. — 4 - Thiazolidone - 2 - n-Caproic Acid and Salts.

2,678,930—U. S. A.—N-Chloro-2-Substituted Imidazolines.

2,678,931—Upjohn — Disubstituted Octahydronaphthalene-1,2-Dicarboxylic Acid.

2,678,932—Sterling Drug — Iodinating Keto - Steroids.

2,678,933—Upjohn—Steroids.

2,678,948—Am. Home Products — Substituted Glycinamide.

2,679,459—Universal Oil Products—Stabilization of Edible Fats & Oils with a 2, 6-dialkyl-4-alkoxyphenol.

2,679,476—Shulton—Isomerization of Citronellol to Rhodinol with Ultra-Violet Light.

2,679,482—Colgate—Synthetic Detergent Contains Higher Saturated Aliphatic Glycols.

2,679,500—Wm. S. Merrell—Substituted M-Thiazane-4-Ones.

2,679,501—Hoffmann-La Roche—Amino Derivatives of 2-Substituted-4-Tert. Butylphenol Ethers.

2,679,502—Ciba—Prenp. of Cyclopentanopolyhydrophenanthrenes.

2,679,509—T. Hasselstrom—Perionic and Pinoylformic Acid Esters.

2,679,531—Eli Lilly—Ortho (3, 5-Diiodo-Benzyl) and Ortho (3, 5-Diiodo-Benzoyl)-Benzoic Acids.

2,679,532—Upjohn—Acid Hydrolysis of Neomycin.

2,679,533—California Research Corp.—Addition

Old Empire

ALCOHOLIC PREPARATIONS

- PERFUMES
- COLOGNES
- AFTER SHAVE
- HAIR DRESS
- HAIR LACQUERS

AND ALL ALCOHOLIC SPECIALTIES

Bulk or Packaged

FULLY AUTOMATIC PACKAGING EQUIPMENT
FILLING • CARTONING • CELLOPHANING

RAILROAD SIDING • TANK WAGON FACILITIES

We Handle All Alcohol Forms For You

OLD EMPIRE INC.
Mt. Prospect & Verona Aves., Newark 4, N. J.
HUmboldt 4-2121

VC

NEOMYCIN SULFATE

Microatomized
Regular Powder

An antibiotic with an unusual degree of stability for topical, oral and parenteral use.

Literature and samples available on request.

a dependable source for hormones and fine chemicals

VITAMERICAN OIL CORPORATION
1 John Street, Paterson 2, New Jersey

Prefer MAGNESIUM STEARATE U.S.P. TO ZINC—
for baby powders, body powders, face powders?

Call on Whittaker "The Talc House"

Whittaker #905 Magnesium Stearate U.S.P., an outstanding product, exacting uniformity for cosmetics, tablet binding, chemical and pharmaceutical manufacturing

ZINC STEARATE
Whittaker has a grade for every cosmetic and drug manufacturing formulation

TALCS
•
THOMASSET CERTIFIED COSMETIC COLORS
•
SPECIAL #900 POWDER BASE

1229

WHITTAKER CLARK & DANIELS, INC.
260 West Broadway
New York 13, N. Y.

Chemical Specialties

GELLOID
(Pure calcium Carragheen sulfate)

GUMS
ARABIC—TRAGACANTH—KARAYA
(Whole, granular or powdered)

HYDROSULFITE of SODA
(Pharmaceutical grade)

SULPHONATED OILS
(Vegetable and mineral bases)

VISCO GUM E
(Specially prepared for wave-set solutions)

Ask for "The Story of Water Soluble Gums"

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

Products of Halogen & Quat. Ammonium Germicides.

2,680,088—**Wallace & Tiernan—Antimycotic Compositions (Salicylanilide and zinc undecylenate).**

2,680,115—**Winthrop-Stearns — Substituted Tertiary Aminoalkyl Carbinols.**

2,680,116—**Hoffmann-La Roche—Piperidiones.**

2,680,118—**Smith, Kline & French Labs.—Production of Khellin.**

2,680,122—**Swift & Co.—Stabilization of Fats for Soap.**

2,680,133—**Mallinckrodt — Iodine - Containing Amino-Benzoyl Derivatives of Amino Acids.**

2,680,701—**Multibiotics — Antibiotic - Impregnated Gauze Pads.**

2,680,702—**Centre National de la Recherche Scientifique. Paris—Antigeu` from Dead Tubercle Bacilli.**

2,680,703—**Glycerine Corp. of America—Glycerine from Molasses.**

2,680,704—**Backhefe (Germany) — Fermentation Glycerine.**

2,680,739—**Am. Cyanamid — Sodium Penicillin Production.**

2,680,744—**Merck—Preparing Therapeutic Amino Acids Solutions.**

2,680,762—**Glaxo Labs.—Prepn. of 2:6-Diiododiphenyl Ethers.**

2,680,765—**Merck — Gamma - Acyloxy - Tertiary Amines.**

2,681,281-3—**Eastman Kodak — Stabilizers for Fatty Materials.**

2,681,339—**Nippon Kayaku (Japan)—Pyrimidine Penicillin.**

2,681,343—**Sterling Drug — 5 - n - Heptyl - 2 - Thiohydantoin.**

2,681,359—**G. D. Searle—Alpha (Hydroxyphenyl) Cyano Cinnamonitriles.**

2,681,363—**Schering—Hydroxy Phenyl Aliphatic Carboxylic Acids and their Iodo Derivatives.**

2,681,365—**Sterling Drug — N - (3,4 - Dichlorobenzyl) - N - (n - Dodecyl) - N,N - Di - (2 - Hydroxyethyl) Ammonium Chloride.**

2,681,366—**Research Corp.—Production of 2-Keto-10-Methyl-1, 2, 5, 8, 9, 10-Hexahydronaphthalene.**

2,681,367—**G. D. Searle — 7 - Isopropyl - 12 - Methyl-2, 3, 4, 9, 10, 12 Hexahydro-2-Phenanthrone.**

2,681,880—**Aerosol Corp. of America—Aerosol Dilating Medical Composition.**

2,681,906—**Bristol Labs.—Pyridium Penicillin.**

2,681,909—**Bristol Labs.—2-Benzhydrylaminopyridine.**

2,681,910—**Parke, Davis — Halogenated Quinolinols.**

2,681,911,2—**G. D. Searle—Tetrahydro - Isoquinolinalkanol Esters of Aromatically Substituted Aliphatic Acids and Cycloaliphatic Acids.**

2,681,913—**G. D. Searle—Esters and Salts of N,N-**

Disubstituted Amino Acids and Hydrogenated 4,7-Methanionden-6-ols.

2,681,914,5—**J. R. Geigy—Thiazolyl-2, and Pyrazoyl-5, Dimethyl Carbamates.**

2,681,916—**J. R. Geigy—Carbamic Esters.**

2,681,919—**Upjohn — 4,7,9(11) - Pregnatriene 3,12,20-Trione.**

2,681,928—**Abbott Labs.—α-Phenylisobutyrlurea. Anticonvulsant.**

2,681,931—**G. D. Searle—Basic Amides of Bicyclo (2.2.1)-5-Heptene-2-Carboxylic Acid and 2-Nor-Camphanecarboxylic Acid.**

2,681,932—**G. D. Searle—Lower Dialkylaminoalkyl Ethers of 1,2,3,4-Tetrahydronaphthalene.**

2,681,933—**Bristol Labs.—β-Chloroethylamines.**

2,682,487—**West Disinfecting Company — Penicillin Control in Sugar Extraction.**

2,682,492—**Research Corp.—Method of Making Brucellosis Vaccine.**

2,682,493—**Bristol Labs. — Streptomycin Production Using Hens' Eggs.**

2,682,537—**Bristol Labs.—Diphenyl Ethanolamine Salt of Penicillin.**

2,682,538—**Bristol Labs.—Penicillin Salt of α-Phenyl-β-Morpholinoethyl-α-Chloroacetate.**

2,682,539—**Bristol Labs.—Penicillin Salt of α-Phenyl-β-Dibenzylaminoethanol.**

2,682,540—**Bristol Labs.—Penicillin Salt of α-Phenyl-β-Piperidinoethyl Carbanilate.**

2,682,544—**Sterling Drug — Aryl - Pyridylmethyl Alkyl Sulfones.**

2,682,548—**G. D. Searle—Δ^5-Androstene-3β, 17α-Diol-16-One Ethers.**

2,682,549—**Colgate-Palmolive — Production of Palmitic Acid.**

2,682,555—**G. D. Searle — 1 - Hydroxymethyl - 1,12 - Dimethyl - 1,2,3,4,6,7,9,10,11,12,12 - Dodecahydro-7-Phenanthrone and Esters.**

2,682,561—**Merck—Diaryl Neopentanes.**

2,683,074—**York Corp.—Process for Deodorizing and Sterilizing Air.**

2,683,106—**M. J. Lewenstein—Analgesic Composition Containing Heart and Respiration Stimulants, such as Pentamethylene-tetrazol.**

2,683,142—**Merck — High pH Dihydrostreptomycin.**

2,683,145—**Research Corp.—Azacycloheptanones.**

2,683,146—**G. D. Searle — Tetrahydroisoquinoliniums.**

2,683,147—**J. R. Geigy—Quat. Ammonium Compounds of Bis-Tertiary Aminoalkoxy Alkanes.**

2,683,153—**Research Corp. — Conversion of 20-Keto-21, 21-Dihydroxy Steroids to Δ^{17-20}-20-Hydroxy-21-Oxo-Steroids.**

2,683,166—**Am. Cyanamid—o,o'-Di-(Carbalkoxyamino)-Diphenyldisulfides.**

2,683,167—**J. R. Geigy—Diaminoniums.**

2,683,171—**Schenley — Benzyl Cinnamyl Ketone Thiosemicarbazones.**

DEPEND ON

HALBY

FOR TOP QUALITY IN

THIOGLYCOLATES

Tailored to your individual needs:

- Extracted Ammonium Thioglycolate
- Distilled Thioglycolic Acid
- Calcium Thioglycolate
- Custom-made Esters and Derivatives of Thioglycolic Acid

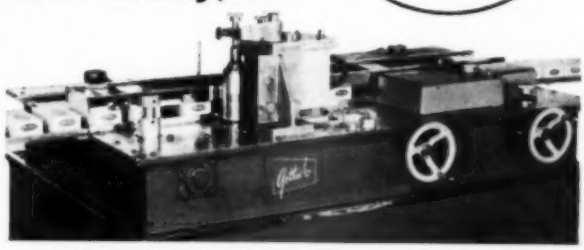
We invite your inquiries

HALBY PRODUCTS CO.
WILMINGTON 99, DELAWARE

SALES REPRESENTATIVES:

Stanton Sales Co., 40 E. 40th St., New York 16, N. Y.
McNerney Chemical Corp., Los Angeles 23, Cal.
V. & S. Morch, 6346 MacDonald Ave., Montreal 29, Que.

Get neater, cleaner, more accurate imprints on your packages... and save money, too



This Markoprinter "M" Machine (formerly Markocoder "3M") prints codes, control numbers, expiration dates, other changeable legends on cartons, boxes, cans... *automatically*... as part of the packaging operation. Produces clean, uniform, accurately located impressions consistently...saves cost of manual stamping. Widely used, too, for imprinting different product identifications on blank panels of partially-printed "common" package.

For complete details...
write-wire-phone... today

Gottscho

ADOLPH GOTTSCHO, INC.
Hillside 5, N. J.

50 Years of Leadership

2,683,680,1—**Am. Cyanamid — Recovering and Purifying Vitamin B_{12} Activity.**

2,683,682—**Research Corp.—Differential Inactivation of Enzymes.**

2,683,692—**Monsanto — Nonfoaming Surface - active Alkyl Benzene Sulfonate Composition.**

2,683,711—**Boots Pure Drug Co. (England)—Penicillin-Amine Salts.**

2,683,712, *2,683,722*, *2,683,723*—**Upjohn — Steroid Alkali-Metal Enolates.**

2,683,713—**Eli Lilly—Substituted Benzylisoquinolines.**

2,683,714,5—**Knoll A. G. (Germany)—4-Tertiary Amino-1-Alkyl-Piperidines.**

2,683,719—**S.K.F. Labs.—N-(β-Phenoxyisopropyl) Ethanolamines.**

2,683,724—**Upjohn—Steroid Glyoxalates.**

2,683,725—**Upjohn—Testosterones.**

2,683,742—**G. D. Searle — N,N - Disubstituted Omega - Arylmethoxy - Omega - Aralkylamines.**

2,683,744—**SKF Labs. — N - Alkoxyalkyl - β - Haloethylamines.**

2,684,321—**Rohm & Haas—Skin-Treating Ion Exchange Mixture.**

2,684,322—**Upjohn—Ion Exchange Purification of Vitamin B_{12}.**

2,684,323—**Physiological Chemicals—Procaine Ascorbate Prepn.**

2,684,331—**Dow—Separation of Substances having Different Degrees of Ionization. Involves Use of Ion Exchange Resin.**

2,684,362,3—**Schenley—Production of Alkali Salts of Penicillin.**

2,684,364—**Parke, Davis—Oxidosteroids.**

2,684,365—**E. Mosettig et al—Conversion of Tomatidine into Δ^{16}-Allopregnenolone.**

2,684,367—**Abbott Labs. — Alkoxyphenyl - Alkoxy - Acridanes.**

2,684,368-70—**Warner-Hudnut — Basic Esters of Substituted Thienyl Acetic Acids; Thienyl Cycloalkenyl, Acetamides; and Aminoalkyl-2-Thienyl-Cycloalkenyl Thiolacetates.**

2,684,372—**Wm. S. Merrell—Dioxide of 2,7-Diaminothioxanthol and Xanthone.**

2,684,375,6—**Schering—Steroid Halogenation and Oxidation.**

2,684,386—**General Aniline—Halogenated O′ O′-Dihydroxy Diphenyl Methane Alkyl Ether.**

2,684,925—**Technicon Chem. Co. — Liquid for Treating Tissue in Histologic Processing.**

2,684,946—**Th. Goldschmidt A. G. (Germany)—Washing and Disinfecting Composition. Polyethylene Polyamines.**

2,684,962—**Maltbie Labs. — 3 - β - Hydroxyalkyl - 3,(1) Benz-2-3-4-5 Tetrahydro-Azepines.**

2,684,963—**Abbott-Glidden — Production of 17 - Bromo Steroids.**

2,684,965—**Abbott Labs.—Aminoalkylpiperidines.**

2,684,968—**G. D. Searle—21-Halo-11β, 17a-Dihydroxy-4-Pregnene-3, 20-Diones.**

2,684,970—**Imhausen & Co. (Germany)—Production of Hard & Brittle Fats.**

2,684,971—**Colgate—Bleaching and Stabilization of Fatty Acid Esters.**

2,685,553—**Winthrop Stearns — Cement Coated Tablets.**

2,685,554—**Am. Cyanamid—Penicillin Production with Potassium Acid Phthalate as a Fermentation Buffer.**

Court Cases

2,418,664—**Ramsey, Hair treating cream, filed Jan. 26, 1954 (St. Louis), Ramsey v. Kantol Co.**

2,646,384—**M. L. Rakieten, Therapeutic water-soluble chlorophyll-containing feed, filed Jan. 28, 1954 (Grand Rapids, Mich.), Rystan Co. v. Eberhard Foods, Inc.**

2,594,180—Re. 23,746—**Klinger and Dick, Vaccine, Corn States Serum Co. v. Ft. Dodge Labs., D. C., Delaware, filed March 8, 1954.**

2,322,245, 2,380,534—**For hypodermic injector. Held valid and infringed. Becton Dickinson v. R. P. Scherer, Circuit Court of Appeals, Michigan.**

2,489,530—**For method of making 8 - hydroxyquinoline. Claims 1, 2, 9, 11 and 14 held valid but not infringed. Darsyn Labs. v. Lenox Labs.**

2,403,473—**Ansbacher, Therapeutic Composition, Am. Home Products v. Wilshire-Carthary, D. C., California. Claims 1 and 4 held invalid.**

Perfumed Aerosols

(Continued from page 315)

while the higher boiling point compound would represent a safety factor which would keep the mixture from building up excessive pressures at high atmospheric temperatures.

If relatively low quantities of propellant are desired in the cologne or toilet water preparation, it would be best conceivably to use a higher concentration of the low boiling point product, since the final mixture under these circumstances may be subjected to as high an interval pressure as would be a large ratio of propellant containing a higher percentage of the trichloromonofluoromethane. Propellant containers subjected to higher temperatures must be able to withstand temperatures of 140° F. At this temperature trichloromonofluoromethane has an absolute pressure of about 45 lbs./sq. in. as compared to an absolute pressure of about 11/sq. in. at 60° F. The dichlorodifluoromethane on the other hand, has an absolute pressure of over 200 lbs./sq. in. at 140° and an absolute pressure of about 70 lbs./sq. in. at 60° F. Hence the necessity of dilution with the higher boiling compounds. If there are relatively large concentrations of alcohol as compared to the propellant, that overall concentration of the lower boiling point propellant in the propellant mixture could

be increased. The finished container must pass the 140° F. water bath test, however, as prescribed by law.

Another consideration deemed important by many is the "torch effect" due to too high a concentration of alcohol. Under these conditions, the spray when propelled through a flame could ignite and though one would not expect the user to apply the toilet water or lotion under conditions where there are open flames about, it has and can happen. There are some preparations on the market which have considerable "torch effects" but many manufacturers are desirous of cutting this down to a minimum. The propellants themselves are now inflammable and the method therefore used is to increase the propellant ratio so that the danger of "torching" is nullified. In many preparations of this type the propellant may consist of 75 per cent of the contents. As previously discussed, so large a concentration of propellant increases the problems in formulation because of incompatability of many of the essential oils. In addition a relatively large amount of the higher boiling propellants must also be added and this further introduces a residual odor problem.

This problem is not serious since on standing the odor disappears, but it should be taken into consideration. The higher boiling propellants are not volatilized immediately on application and they may therefore introduce an odor faintly suggesting carbon tetrachloride. This disappears in a short time however, and the odor is thereafter due only to the essential oils applied. It is suggested that in the formulation of compounds for this purpose that attempts be made to mask this momentary unpleasantness, since many women would not use the product because of this defect.

The discussion so far has been limited to toilet waters and colognes containing relatively small concentrations of essential oils. In any final formulation the essential oil content should be the same concentration notwithstanding the variation in the ratios between propellant and alcohol. In the final analysis the user is interested in the odor imparted to her skin and in the concentrations of it. Therefore it is important to keep the oil concentration the same as it is kept is the usual alcoholic solution.

In the case of perfumes where the oil concentration is considerably higher, the problems are multiplied because of the greater danger of precipitation and because of the nature of its use—the spray must be confined to a relatively small area. This may be accomplished by proper design of the valve coupled with a minimum pressure. What would be most desirable would be a stream rather than a spray, and this can be done.

Another word about the problems of precipitation. This may not happen immediately after manufacture or within a short period necessarily. The product should therefore be placed under observation for a minimum of six months before deciding that there is no possibility of such a defect. In addition it would be wise to subject it to both high temperature and low temperature studies to be further sure.

for YOUR PRIVATE BRAND PRODUCT
MANUFACTURED
and
Quality Controlled
EVERY STEP FROM IDEA TO FINISHED CREATION.
PERFECT PACKAGING OF YOUR PRODUCT.
NO CUSTOMER TOO LARGE OR TOO SMALL.
Counselling, Designing and Art Service for every package.
Our own Label Printing and Designing Plant.
Bottle and Jar Decorating Equipment on the Premises.
CREAMS, LOTIONS, LIQUIDS, SHAMPOOS, UP-TO-DATE FORMULATIONS.
CONTRACT FILLING, PACKAGING TO SPECIFICATIONS.
WINDSOR CHEMICAL LABORATORIES
161 LEVERINGTON AVE., PHILADELPHIA 27, PA.

EASY TO OPERATE

ALUMINUM CRIMP SEALER

11 mm. to 43 mm.

This sturdy, economical crimper seals vials from 1 cc to 1 liter up to 30 a minute. This full range machine is used in pharmaceutical, biological and veterinary plants as well as in laboratories and hospital pharmacies.

Write for new catalog #454 describing entire line of PerfeKtum equipment, including new rubber stoppering and aluminum crimping machines.

VIALFIL MODEL CM 15

Established 1922

POPPER & SONS, INC.

300 FOURTH AVENUE

NEW YORK 10, N. Y.

Professional Service

EVANS RESEARCH & DEVELOPMENT CORP.
Chemical research—processes—products
Special facilities for cosmetics
SEND FOR BOOKLET "D"
250 E. 43rd St., N. Y. 17, N. Y. MU. 3-0071

ARLINCO RESEARCH LABORATORY, INC.
Research, Formulation and Application to the Industry. Ethical Pharmaceuticals, Drugs, Cosmetics and Perfumery.
333 W. 52nd St., New York 19, N. Y.
PLaza 7-2861
*A-R-L-Inco means: Applied Research Laboratory, Incorp.

LEBERCO LABORATORIES
Hormone Assays • Drug Assay
Pharmaceutical and Cosmetic Research
Sterility Tests • Toxicity Studies
Send for information concerning our services
125 HAWTHORNE ST., ROSELLE PARK, N. J.

RESEARCH LABORATORIES
FOSTER D. SNELL INC.
29 WEST 15th ST. NEW YORK 11, N.Y. — WA 4-8800
CHEMISTS • ENGINEERS

SEIL, PUTT & RUSBY, INC.
Analytical, Consulting, Research Chemists
Established 1921
Specialists in analysis of Drugs, Cosmetics Essential Oils.
Ask for Estimates-Quotations-No Obligation
Lab's: 16 East 34th Street, New York 16, N.Y.
Telephone Murray Hill 3-6368

The Washington Institute for Experimental Medicine
Herndon, Virginia
Just across the Potomac from the Nation's Capitol
FOOD, DRUG and COSMETIC RESEARCH
Screening tests and Toxicological Studies.
75 acres devoted to growth and development.

WISCONSIN ALUMNI RESEARCH FOUNDATION
Project Research, Consultation, and Production Control Services *in* Biochemistry, Chemistry, Bacteriology, Entomology, and Pharmacology
Write for Price Schedule
WISCONSIN ALUMNI RESEARCH FOUNDATION
P. O. BOX 2159 • MADISON 1, WISCONSIN

TRUESDAIL Laboratories, Inc.
Write for Brochure-4101 N. Figueroa St. Los Angeles 65, Calif. • CApitol 4148
Product & Process Development Toxicology—Sterility Tests
CHEMISTS • BACTERIOLOGISTS • ENGINEERS
Charter Member ACIL
TL-151C DRUG & COSMETIC INDUSTRY

Classified Advertising

Machinery and Equipment For Sale

UNION Rebuilt Machinery
Established 1912
MODERN REBUILT & GUARANTEED EQUIPMENT
Available at Bargain Prices

Fitzpatrick "D" S.S. Comminutors with variable screw feed.
F. J. Stokes R8B Tablet Machine.
Capem 1SF, 4-Head Cappers.
Copper Coating Pans, 24" to 40" diameter.
B. P. 2 to 200 gal. Double Arm Mixers.
Pfaudler King, Horix, Elgin Stainless Steel Rotary Fillers.
Kyler and Burt Wraparound Labelers.
Robinson Powder Mixers, 100 to 10,000 lbs. cap.
Robinson, Tyler Hum-mer, Selectro, Great Western Sifters.
Mikro Bantam 1SH, 3W, 4TH Pulverizers.
Hobart, Read, Glenn 30-120 qt. Mixers.
B. P. Jumbo-Type 3500 gal. Steam Jacketed, Double Arm Sigma Mixer.
S. & S. G1, G2, HG88 Powder Fillers.
Colton 2RP and 3RP Rotary Tablet Machines.
Stokes Electric Shelf Drying Oven.
Hayssen, Package Machy., Oliver, Hudson Sharp, Scandia, Miller Wrappers.

This Is Only a Partial List

Tell Us Your Requirements

Complete Details & Quotations Promptly Submitted

UNION STANDARD EQUIPMENT CO.
318-322 Lafayette St., New York 12, N. Y.

FOR SALE: 1-Baker Perkins S.S. jacketed Mixer 35 gal.; 1-Day S.S. Mixer 50 gal.; 9-Stokes DDS2, DD2, BB2, D4, D3 and B2 Rotary Tablet Machines: 1-Mikro No. 2 TH S.S. Pulverizer; 6-Rotex Sifters 40"x120", 40"x84", 40"x56", 20"x48" single and double deck; 1-Robinson 4000 lbs. heavy duty Powder Mixer; 1-Day 2000 lbs. Powder Mixer; 2-Shriver 30" and 24" aluminum P&F Filter Presses; 3-Groen 150 and 125 gal. S.S. agitated Kettles; 4-Devine Vacuum Shelf Dryers 4, 6, 10 and 17 shelves. Partial Listing. Send for "News Flash", BRILL EQUIPMENT COMPANY, 2402 Third Avenue, New York 51, New York.

FOR SALE: Stainless Steel tanks and kettles, new and used. Mixers, filters, tablet presses, etc. PERRY EQUIPMENT CORP., 1429 N. 6th Street, Philadelphia 22, Pa.

FOR SALE: At our new location in Hoboken, N. J. Send us your inquiries for SS. Kettles and Tanks, Filter Presses, Mixers, Filters, Grinders, Pebble Mills, Portable Agitators, Filling Machines, Dryers, Pulverizers, Labellers. We are interested in buying your idle or surplus machinery; single items to complete plants. CONSOLIDATED PRODUCTS CO., INC., 69 Garden Street, Hoboken, N. J. HO3-4425. N.Y. Tel. BA 7-0600.

Machinery and Equipment For Sale

FOR SALE: Stokes Rebuilt B-2 Rotary Table Machine; Dry Powder Mixers 200 to 4000lbs. Inclusive; Vacuum Shelf Dryers—3 Stokes 138-F—Six Shelf; Buffovak 42 x 42—20 Shelf; Mikro 2TH Pulberizer 15 H.P.; Colton & Stokes Tube Fillers & Closers; Rotex Screens 20" x 48"—40" x 66"—40" x 120"; S. & S. G1 Powder Filler; Eppenbach S.S. QV-6 Colloid Mill; Stainless Steel Kettles & Tanks—New Stainless Steel Powder Mixers; Pony Labelers etc. Send for complete listings. We buy single items or complete plants. THE MACHINERY & EQUIPMENT CORP., 533 West Broadway, New York 12, N. Y. GRamercy 5-6680.

FOR SALE: Stainless Steel Tanks & Kettles. Tablet Machines. Portable Elec. Agitators. Mixers, Grinders, Pebble Mills, Filter Presses, Dryers, Filling Machines, Labelers, Capping Machines, etc. Send for listing. STEIN EQUIPMENT CO., 107 8th St., Brooklyn 15, N. Y. STerling 8-1944

Machinery Wanted

WANTED: To round our production; Automatic Filler & Closer for collapsible tubes, Fitzpatrick S/S Comminutor, Tablet Counter, and high speed Packaging Line. Give full details and price. Box N-5, DRUG AND COSMETIC INDUSTRY.

Help Wanted

CONFIDENTIAL:

We are looking for a Manager of Engineering. He is a man educated as an engineer, whose experience for the past 15 years has been one of progress through the engineering departments of at least a medium-sized, consumer-processed-product manufacturer. He should now be the chief engineer of such a manufacturer, earning at least $12,000 a year. A higher present salary could be evidence of greater desirability. The types of manufacturers in whose employ he will be found include chemical, drug, cosmetic, or food companies employing the most modern production techniques. He will have been reponsible for all new construction and equipment, as well as other engineering functions, for this company for at least the past five years. A record of real accomplishment, rather than a potential for accomplishment, is a requisite. In the position we want to fill, he will have the opportunity of earning $20,000 and up. Headquarters will be "Middle Atlantic States" and "city" with a minimum of travel.

If you are interested and can initially meet the qualifications stated, please reply stating your present position, your education, a brief resume of your experience since college and full personal statistics. You may be assured that your reply will be kept most confidential. It is of utmost importance to us to keep it so, too, and any interview resulting from your reply must be with that understanding.

Box S-1, DRUG & COSMETIC INDUSTRY
101 West 31st St., New York 1, N. Y.

Business Opportunities

COLOGNE STICK: We specialize in the production of private brands. Also foot, deodorant, antiperspirant and insect repellent sticks. Let us quote on your requirements. Private Brands Division, SAYMAN PRODUCTS CO., P. O. Box 515, St. Louis 3, Mo.

Wanted commission salesman to sell a famous old pine soap—retailing at $1.00 per box. Many territories now open. Write details re: territory covered and other lines you carry. Box S-2, DRUG & COSMETIC INDUSTRY.

Manufacturer of nationally known drug item; manufacturing other items also. Wishes to sell. Opportunity to expand business. Box S-3, DRUG & COSMETIC INDUSTRY.

The C. E. Ising Corporation

Manufacturing Chemists

AROMATIC PRODUCTS

"I.G." ("ISING" GERMICIDE)

SOAPS FOR KENNELS AND INDUSTRIES

MASKING ODORS FOR INDUSTRIES

FOUNDED 1908

FLUSHING NEW YORK

NYSCAP REPORT

Another in a series of biological tests on NYSCAPS—Nysco timed-disintegration capsules—appears in the August issue of Nysco News & Notes.

Blood level determinations on Pyrilamine Maleate, 75 mgm., and Digitoxin NYSCAPS are reported.

Keep Ahead with NYSCO

Another NYSCO Ethical Service

NYSCO Laboratories, Inc., 22-20 40th Ave., Long Island City 1, N. Y.

TEL: RAvenswood 9-6960-1 • CABLE: NYSCOLAB New York

Use LABELS AND SEALS..

by

JOHN HORN

835 - 839 TENTH AVENUE

NEW YORK 19, N. Y.

FOR OVER FIFTY YEARS

for greater sales appeal

METAL • EMBOSSED • ENGRAVED

DIE STAMPING FOR BOXMAKERS

MOULDS

LIPSTICK - COLOGNE - DEODORANT

STYPTIC PENCILS - MASCARA

SUPPOSITORIES

PROGRESSIVE LABELING MACHINE, Inc.

137 West 22nd St., New York 11, N. Y.

ROUGE COMPACT POWDER

PUNCHES FOR TABLETS

also

FOOT & POWER PRESSES FURNISHED

DIES

NATIONAL ASSOCIATION OF PRIVATE BRAND MANUFACTURERS INCORPORATED

NAPBM

QUALITY DEPENDABILITY INTEGRITY

CHOOSE AN

Association Member

for your

"PRIVATE BRAND"

Learn how you can use "private brand" production with complete confidence. We will be glad to recommend member private brand manufacturers best equipped to handle your requirements . . . whether your order is large or small.

You can **rely** on members of The National Association of Private Brand Manufacturers, Inc., comprised of select manufacturers and contract packagers in the pharmaceutical, cosmetic, soap, food specialties, and household chemicals fields whose primary objective is to assure you of the highest quality, dependability and **confidential** service.

NATIONAL ASSOCIATION OF PRIVATE BRAND MANUFACTURERS INC.

39 Broadway, New York 6, N. Y. Digby 4-5115

Increase Your Sales! use

TOMPKINS'

★ Colorful ★ Eye-Catching ★ Sales-Building

DRUG & COSMETIC

LABELS

OF ALL KINDS

DIE-CUT ENGRAVED HEATSEAL

SQUARE-CUT TYPE PRES-TO-SEAL

ROLLS GUMMED POLYSTIX

BAG-TOP UNGUMMED FOIL ETC

Our COMPLETE LABEL ORGANIZATION is AT YOUR SERVICE

MAIL TODAY NO OBLIGATION FOR COMPLETE INFORMATION

☐ Send samples of your Sales-Building DRUG & COSMETIC Labels.

☐ Submit Sales-Building design for Our Product. (attach label or copy).

☐ Quote on _____ M Labels, as per attached samples or rough copy

Name _____

Address _____

City _____

Zone _____ State _____

TOMPKINS' LABEL SERVICE

Dept. DC Frankford Ave. at Allegheny Ave. Philadelphia 34, Pa.

Seal or Label

Aromatic Chemicals

FOR PERFUMERY AND FLAVORS

Isopropyl Quinoline • Isobutyl Quinoline

Ethyl Anthranilate • Isobutyl Anthranilate

Diacetyl • Acetyl Propionyl • Acetoin

FAIRMOUNT

CHEMICAL CO., INC.

600 FERRY STREET • NEWARK 5, N. J.

HIGH GRADE

COSMETIC POWDERS

Tamms

• Powdered Talc • Infusorial Earth

• English Kaolin • Clay and Silica

• Precipitated Chalk

Write us about your special needs.

Send for prices and samples.

TAMMS INDUSTRIES, INC., Dept. RM-11, 228 N. La Salle St., Chicago 1

Jasmin

CAMILLI, ALBERT & LALOUE, S. A.

Grasse, France **Established 1830**

"MAXIMAROME"

ABSOLUTES

BROOM (Genet)
CARNATION
CASSIE ANCIENNE
CIVET
CLARY SAGE
EVERLASTING (Immortelle)
GERANIUM
JASMIN
JASMIN POMMADES
JASMIN CHASSIS
JASMIN BENZOL
LABDANUM
LAVENDER
LIATRIX
MATE
MELLILOT
MIMOSA
MOUSSE D'ARBRE
MOUSSE D'ARBRE COLORLESS
OAKMOSS YOUGOSLAVIAN
ORANGE FLOWER
ORRIS
ROSE DE MAI
TOBACCO
TUBEROSE POMMADES
VIOLET LEAVES
YLANG YLANG A

CAMILLI, ALBERT & LALOUE, INC.

14 East 48th Street **New York 17, N Y.**

Phone PLaza 3-6070

ADVERTISING INDEX

Adrian & Cie 414
American Aromatics, Inc 412
American Cholesterol Products, Inc 392-393
American Coating Mills Division—Robert Gair Co., Inc 282-283
American Cyanamid Company—Fine Chemicals Div 300
Anchor Hocking Glass Company 330
Aromatic Products, Inc ..... Insert facing 280
Art Tube Company, Inc 346
Atlas Power Company 382

Baker & Bros., H. J 286
Baker Chemical Co., J. T 298
Ball Brothers Company 344
Battle Creek Packaging Machines, Inc 373
Bertrand Freres, Inc 294
Brown Bag Filling Machine Co., Inc 416
Bush & Co., W. J 397

Calumet Manufacturing Co., Inc ..... Insert bet. 324-325
Camilli, Albert & Laloue, Inc 424
Carbide & Carbon Chemicals Div., Union Carbide & Carbon Corp 306
Carr-Lowrey Glass Co 349
Cavalla, Inc., A 412
Chiris Co., Inc., Antoine 288
Chrystal Co., Inc., Charles B 410
Colton Company, Arthur 368, 416
Continental Can Company 336
Continental Filling Corporation 348
Crown Cork and Seal Company, Incorporated 395
Crown Cork & Seal Company, Inc., Crown Can Division 352

Day Co., The J. H 370
Devoid Oil Co., Peder 408
Distillation Products, Inc 292
Dodge & Olcott, Inc ..... 287 and 390
Dow Chemical Co 296
Dreyer, P. R., Inc ..... Insert facing 293
Drug & Cosmetic Review 308
Dunkel & Co., Inc., Paul A 386
du Pont de Nemours & Co., E. I., "Kinetic" Chemicals Division 342-343
Durlin Co ..... Insert bet. 292-293

Eastman Chemical Products, Inc 411
Economic Machinery Company 374
Emery Industries, Inc 387
Ertel Engineering 374

Fairmount Chemical Co 423
Felton Chemical Co., Inc 360
Firmenich & Co., Inc ..... Insert bet. 296-297
Florasynth Labs., Inc 280
Fritsche Brothers, Inc ..... Insert bet. 388-389

Gair Co., Inc., Robert ..... Insert facing 341
Givaudan-Delawanna, Inc ..... Insert bet. 284-285 and Pg. 380
Gottscho, Inc., Adolph 419
Grongoire 403

Halby Products Co 419
Hardesty Co., Inc., W. C 376
Haring Equipmenc Corp 414
Hazel-Atlas Glass Company ..... Insert facing 333
Heyden Chemical Corp 378
Hinde & Dauch 338
Hoffmann-La Roche, Inc 277
Hormann & Co., F. R 410
Horn, John 423
Huisking & Co., Inc., Chas. L 408

Imco Container Corp ..... Insert facing 340
Ising Corp., C. E 423
Ivers-Lee Company 354

Kelton Cosmetics Co 402
Kimberly-Clark Corp 325
Kimble Glass ..... Insert facing 356
Kolar Laboratories, Inc 297
Kolmar Laboratories 358
Koster-Keunen Mfg. Co., Inc 386

Lautier Fils 285
Lueders & Co., George 293
Lusteroid Container Co., Inc 401

Magnus, Mabee & Reynard, Inc 304
Mallinckrodt Chemical Works ..... Insert facing 309
Maryland Glass Corp ..... Insert facing 288
Mathieu, Inc., Charles 408
Merck & Co., Inc 289

National Aniline Div., Allied Chemical & Dye Corp ..... Insert facing 284 and 308
National Association of Private Brand Manufacturers, Inc 423
Neumann, Busse & Wolfe, Inc 413
New Jersey Machine Corp 375
New Jersey Zinc Co 405
New York Quinine & Chemical Works, Inc ..... Insert facing 285
Norda Essential Oil & Chemical ..... Cover 2
Nysco Laboratories, Inc 423

Old Empire Mfg. Chemists, Inc 417
Owens-Illinois ..... Insert facing 329 and 332

Parsons-Plymouth, Inc., M. W 396
Pennsylvania Glass Products Co., Inc 328
Perl Machine Mfg. Co 406
Pfaltz & Bauer Co., Inc 412
Pfizer & Co., Inc., Chas ..... Cover 4
Plax Corporation 339
Pneumatic Scale Corp., Ltd 366
Polak & Schwarz, Inc 290
Popper & Sons, Inc 421
Potdevin Machine Co 413
Precision Valve Corp 334
Private Label Cosmetics 404
Progressive Labelling Machine Inc 423

Reheis Co., Inc 407
Rhodia, Inc 399
Risdon Mfg. Co., The 347
F. Ritter & Company 398
Rohm & Haas Company 302
Roure-Dupont, Inc 281

Santonin Company of America 408
Scoville Manufacturing Company 345
Sheffield Tube Corp ..... Insert facing 357
Shulton, Inc ..... Insert facing 324
Sindar Corporation 362
Standard Pharmacal Co 398
Sterwin Chemicals, Inc 279
Stokes Machine Co., F. J 364
Strong Cobb & Co., Inc ..... Insert bet. 292-293
Sunkist Growers 295
Swift & Co 291
Synfleur Scientific Labs 350

Tamms Industries, Inc 423
Thurston & Braidich 406
Tompkin's Label Service 423

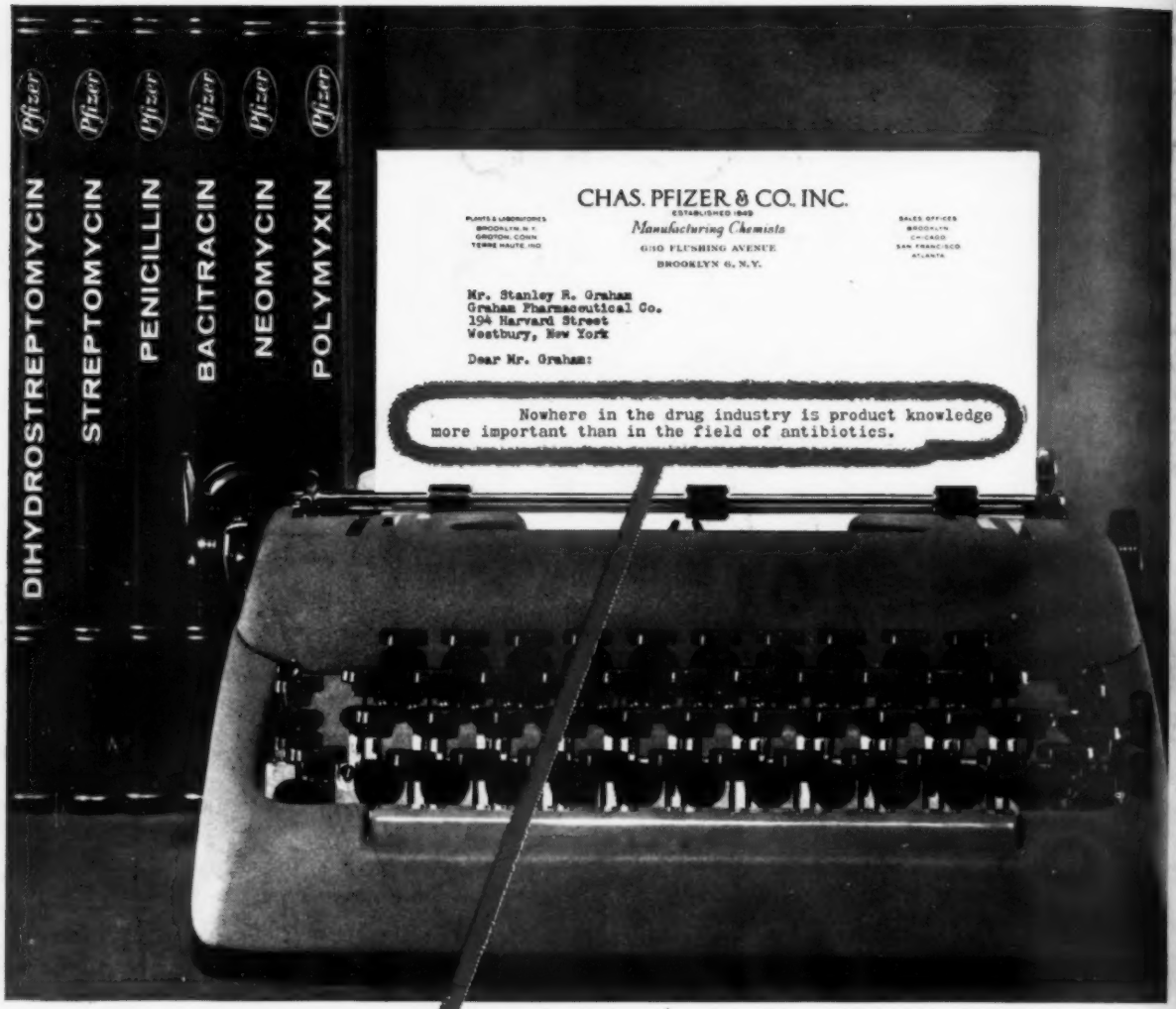
Ungerer & Co., Inc ..... Cover 3
Union Carbide & Carbon Corp., Carbide & Carbon Chemicals Div 306
U. S. Bottlers Machine Co 415
U. S. Industrial Chemicals, Inc., Insert bet. 280-281

van Ameringen-Haebler, Inc ..... Insert bet. 308-309
Vanderbilt Co., R. T 409
Verona Chemical Co ..... Insert facing 292
Vitamerican Oil Corp 417

Welch, Holme & Clarke, Inc 394
Wheaton Co., T. C 326
Whittaker, Clark & Daniels, Inc 418
Will & Baumer Chandle Co 284
Windsor Chemical Laboratories 421
Wolf & Co., Jacques 418

BERGAMENE Extra U&co

The best perfumers have tested the new BERGAMENE Extra and have found it to be the nearest to the NATURAL OIL BERGAMOT.



You can turn our knowledge into MORE SALES...when you use

PFIZER BULK ANTIBIOTICS

● To prepare effective, readily acceptable, profitable antibiotic specialties, you need detailed knowledge of many complexities . . . the anti-bacterial spectrum, pertinent clinical data, relative effectiveness of various dosage forms, stability, labeling requirements and many other important factors. It just naturally follows that the logical place to turn for such information is to the world's largest producer of antibiotics, Pfizer.

Starting in 1941 as one of the pioneer producers of penicillin, Pfizer has been amassing data useful to every stage of antibiotic production and application . . . data that is continually kept current with the latest findings in the field.

Moreover, you have at your disposal the most extensive line of bulk antibiotics on the market . . . produced with rigid control over every process, thus assuring outstanding quality.

So talk to Pfizer about your bulk antibiotic requirements. As you can see, it's worth your while.

CHAS. PFIZER & CO., INC.

CHEMICAL SALES DIVISION

630 Flushing Ave., Brooklyn 6, N. Y.

Branch Offices: Chicago, Ill.; San Francisco, Calif.; Vernon, Calif.; Atlanta, Ga.

Manufacturing Chemists for Over 100 Years Pfizer